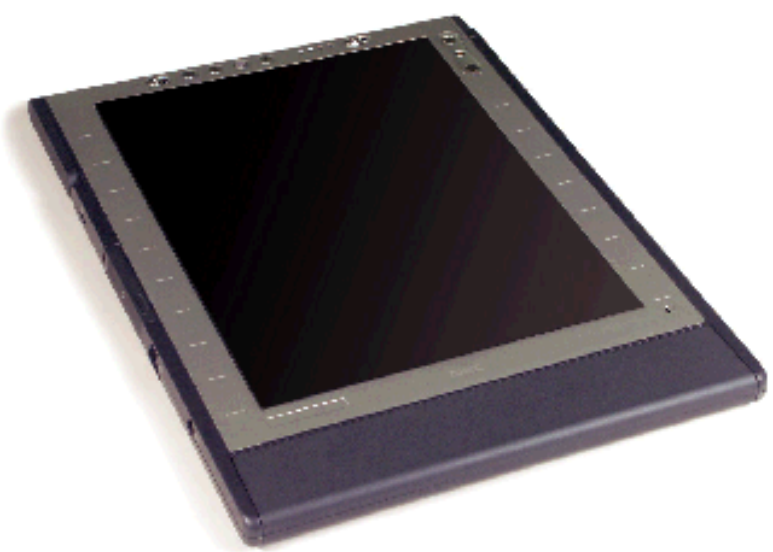
Versa LitePad™

Tablet PC

User's Guide



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4 Using the Operating System and Utilities

5 Adding Expansion Devices

6 Communicating with Your NEC Versa

Using This Guide

The *NEC Versa LitePad™ Tablet PC User's Guide* gives you the information you need to maximize the use of your NEC Versa LitePad tablet PC. Read this guide to familiarize yourself with the tablet PC and its features. For specific information, see:

- Chapter 1, "Introducing the NEC Versa LitePad Tablet PC," to acquaint yourself with the tablet PC and its accessories.
- Chapter 2, "Getting Started," for instructions on how to set up the tablet PC stand, connect the AC adapter, power on, and care for your system. You can find tips for working and information about using the tablet PC pens.

  This chapter also includes important information about using battery power.
- Chapter 3, "Using the BIOS Setup Utility," for details about modifying system parameters. The chapter includes information about a Battery Refresh option in the BIOS Setup utility Standard menu.
- Chapter 4, "Using the Operating System and Utilities," for an understanding of your Microsoft® Windows® XP Tablet PC Edition operating system and its power management features. You can also find information about system utilities and applications available for your tablet PC.
- Chapter 5, "Adding Expansion Devices," to add and use USB devices, such as optical drives, and to add a CF Card, an external monitor, headphones, a printer, or speakers.

  This chapter also includes installation information for upgrading the memory module in the NEC Versa LitePad tablet PC.
- Chapter 6, "Communicating with Your NEC Versa," for essential information about using the built-in wireless LAN and LAN connection, and to connect to the Internet.
- Chapter 7, "Traveling Tips," for a variety of checklists to help you to prepare the tablet PC for travel, getting through customs, and using your LAN connection when you are on the road.

- Chapter 8, “Solving System Problems,” for simple solutions to common problems that may arise while operating your tablet PC.
- Chapter 9, “Getting Service and Support,” for information about getting help when you need it from NEC Solutions America.
- Appendix A, “Setting Up a Healthy Work Environment,” for guidelines that help promote a healthy work setting.
- Appendix B, “Specifications,” to review NEC Versa LitePad tablet PC specifications.
- Appendix C, “Frequently Asked Questions,” (FAQs) for a look at questions that users commonly ask and the answers to those questions.

Text Conventions

To make this guide as easy as possible to use, text is set up as follows.

- Warnings, cautions, and notes have the following meanings:

WARNING Warnings alert you to situations that could result in serious personal injury or loss of life.

CAUTION Cautions indicate situations that can damage the hardware or software.

Note Notes give particularly important information about what is being described.

- Names of keys are printed as they appear on the keyboard, for example, **Ctrl**, **Alt**, or **Enter**.
- Text that you must type or keys that you must press are presented in bold type. For example, type **dir** and press **Enter**.

Related Documents

See the following documents for additional information about your NEC Versa LitePad Tablet PC:

- *NEC Versa LitePad Tablet PC Quick Setup*
  The Quick Setup shows how to quickly get your system connected and powered on.
- *NEC Versa LitePad Tablet PC Release Notes*
  Release Notes provide additional information about your tablet PC that was not available at the time the user's guide was printed. Information in the Release Notes is the result of extensive product testing.
- *NEC Versa LitePad Tablet PC User's Guide*
  An online version of your printed *NEC Versa LitePad Tablet PC User's Guide* is available on the NEC Solutions America Web site (**www.necsolutions-am.com/mobilesolutions**). Check the Web site for the most current online version of your printed user's guide.

1

Introducing the NEC Versa LitePad Tablet PC

- Before You Begin
- About Your Tablet PC
- On the Front of the Tablet PC
- On the Left Side of the Tablet PC
- On the Right Side of the Tablet PC
- On the Back of the Tablet PC
- About Your Tablet PC Accessories

Before You Begin

⚠ WARNING Prolonged or improper use of a computer workstation may pose a risk of serious injury. To reduce your risk of injury, set up and use your computer in the manner described in Appendix A, Setting Up a Healthy Work Environment.

After completing the steps in the quick setup card that comes with your tablet PC, your NEC Versa LitePad tablet PC is ready to go! To get started, do the following:

- Read Appendix A, "Setting Up a Healthy Work Environment," for guidelines that help you use your computer productively and safely. Information includes how to set up and use your computer to reduce your risk of developing nerve, muscle, or tendon disorders.
- Read through this guide to familiarize yourself with the NEC Versa LitePad tablet PC.

About Your Tablet PC

The NEC Versa LitePad™ tablet PC is a very thin light-weight tablet PC designed for mobility and versatility. This tablet PC can go anywhere you go. Use it like a pen and pad of paper. Write, sketch, and view material directly on the screen. Connect the keyboard and mouse and use your tablet PC as a conventional full-featured PC.

With your tablet PC, access office networks and e-mails at anytime, from any location through wireless LAN. With both LAN and wireless LAN capabilities, you can roam while staying connected to the enterprise LAN. You can use the NEC Versa LitePad tablet PC to view the same material as other users, in real-time in remote locations, and you can discuss and edit documents.

The NEC Versa LitePad comes with the power and connectivity of a full-featured PC. This tablet PC features a powerful ultra low voltage (ULV) Mobile Intel® Pentium® III Processor-M, running at 933 MHz or higher. Your tablet PC provides a wide choice of ports and connectivity, such as a CompactFlash™ Card slot, three USB ports, CRT port, LAN port, and wireless LAN.

Your tablet PC comes with 256 MB of system memory and is easily upgradeable to 512 MB of memory. You have virtually unlimited storage capacity with the 20-GB, or higher, 1.8-inch, 5-mm hard drive and external USB optical drives, such as the standard CD-ROM and optional CD-R/CD-RW drives.

In addition, the Versa LitePad tablet PC comes with the Microsoft® Windows® XP Tablet PC Edition operating system preinstalled and ready to use.

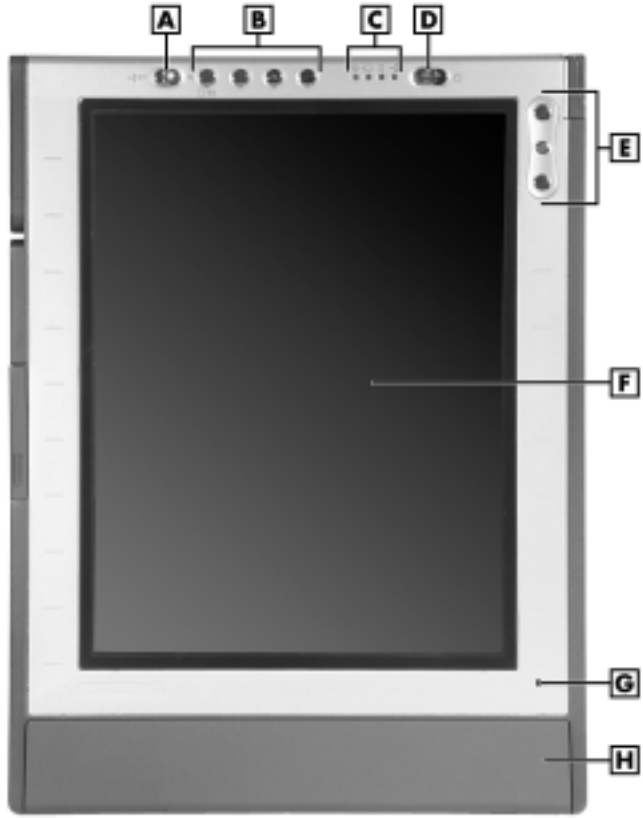
Battery life is an important consideration in the design of your system. The Versa LitePad tablet PC uses the Advanced Configuration Power Interface (ACPI) for saving energy and an easy to replace long-life battery pack for long battery operation.

To get comfortable with your tablet PC and get the most out of it, read the following sections and take a tour around your NEC Versa LitePad tablet PC.

On the Front of the Tablet PC

The NEC Versa LitePad tablet PC is compact with features on the front, back, and sides. See the following figures and information to get familiar with the features on the front of the tablet PC.

NEC Versa LitePad tablet PC – front features

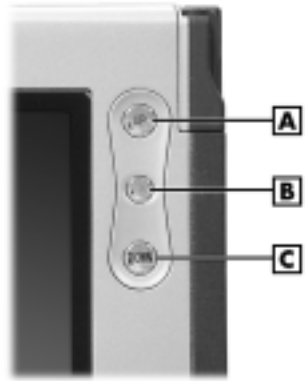


A – Wireless LAN Switch
B – System Control Buttons
C – Status LEDs
D – Power Switch
E – Key Buttons
F – LCD Panel with Protective Cover
G – Built-in Microphone
H – Battery Pack

System control buttons

A – Rotate Screen Button
B – Escape Button
C – Fn Button
D – Security Button

Key buttons



A – UP Button
B – Enter Button
C – DOWN Button

- Wireless LAN Switch — Use this switch to turn on or turn off the integrated wireless LAN device. The wireless LAN device in your tablet PC is a module installed in the mini-PCI slot at the back of the tablet. To maximize battery life, slide the Wireless LAN switch to OFF when you are not using the wireless LAN.

- System Control Buttons — Use these buttons to control system functions such as changing the screen display from portrait to landscape or landscape to portrait viewing, simultaneous viewing of the tablet LCD and an optional VGA monitor, and logging in your security password. System control buttons include Rotate Screen, Esc, Fn, and Security, buttons.

  Button combinations provide multiple functions. You can change and select button functions through the operating system. See "Tablet Controls" in this chapter for information about each button.

- Key Buttons — Use these buttons like keyboard keys for navigation and for application shortcuts. Button combinations provide multiple functions. You can change and select button functions through the operating system.

  Key buttons include UP, Enter, and DOWN buttons. See "Tablet Controls" in this chapter for information about each button.

- Status LEDs — Keep informed about the current operating status of your tablet PC with these LEDs. Status LEDs include the Power LED, Battery LED, HDD LED, and Wireless LAN LED. See "Status LEDs" in this chapter for a description of each LED.

- Power Switch — Power the tablet PC on and off with this switch. You can use the Power switch to save power and optimize battery power when the tablet PC is powered on.

  When power is on, slide the Power switch to suspend and resume tablet PC activity. See "Windows Power Management" in Chapter 4 for information about managing system power resources.

Note If you are unable to power off the system, use the power override. Slide the Power switch and hold it in place for approximately 4 to 5 seconds until the system powers off.

- LCD Panel with Protective Cover — View material and write directly on the LCD panel with your tablet pen. The LCD panel uses a 10.4-inch XGA TFT panel for high-resolution, sharp, effective visuals. A protective coating on the LCD panel provides a durable surface for pen input. You can adjust LCD brightness in Windows XP (see "Startup" in Chapter 2).
- Built-in Microphone — Record monophonic sound directly into your tablet PC.
- Battery Pack— Keep the battery pack installed and charged to run your tablet PC anywhere away from a power source. Charge the battery before use (see Chapter 2). Then keep the battery charged and ready for use. Battery removal and replacement is easy (see Chapter 2).

Tablet Controls

The tablet switches and buttons let you select specific tablet PC operations. See the following information for a description of these tablet controls.

Tablet PC Switches and Buttons

Switch/ Button	Function	Additional Functions with Fn Button
Wireless LAN switch	Turns wireless LAN on or off.	--
Power switch	Turns tablet PC power on or off. When power is on, slide to suspend tablet PC activity. In suspend mode, slide to resume tablet PC activity.	--
Rotate Screen button	Changes the orientation of the screen from portrait to landscape or from landscape to portrait.	Press Fn and Rotate Screen buttons to change between LCD only and simultaneous LCD and CRT display modes.

Tablet PC Switches and Buttons

Switch/ Button	Function	Additional Functions with Fn Button
Escape button	Acts the same way as the Escape key on a keyboard.	Fn+Esc: Alt+Esc (change current window)
Fn button	Works with other buttons to perform multiple functions. To use with other buttons: Press and hold Fn and press the other button. Press and release Fn button, press other button during “Activated Tablet button” message on task tray.	Fn+Fn: Displays a tablet menu of options in the task tray. Fn+Rotate: Change between LCD only and simultaneous LCD and CRT display modes. Fn+Esc: Alt+Esc (change current window) Fn+Security: Ctrl+Alt+Del Fn+Up: Page Up Fn+Enter: Tab Fn+Down: Page down
Security button	Activates the Windows Ctl+Alt+Del security command. When Windows is running, the tablet PC enters the Ctrl+Alt+Delete command. When the BIOS Setup utility is running, the tablet PC enters the reset command. This is the only button that you can use when you are logging in and when the tablet PC is locked.	Fn+Security: Ctrl+Alt+Del

Tablet PC Switches and Buttons

Switch/ Button	Function	Additional Functions with Fn Button
UP button	Operates as an up arrow key on a keyboard.	Fn+Up operates as a Page Up key.
Enter button	Operates as an Enter key on a keyboard.	Fn+Enter operates as a Tab key.
DOWN button	Operates as a down arrow key on a keyboard.	Fn+Down operates as a Page Down key.

Note You can customize the Up, Enter, Down, Esc, or Rotate Screen button as a single button. You can customize button combinations using the Fn button and the Up, Enter, Down, or Esc button.

To customize a button or button combination, use Tablet and Pen Settings in Windows (double tap or double click the Tablet and Pen Settings icon in the system tray or from the Start button, go to Control Panel, Printers and Other Hardware, Tablet and Pen Settings, and select Tablet Buttons).

Status LEDs

The Versa LitePad tablet PC uses status LEDs marked with icons to communicate the status of system power, battery charging activity, hard drive activity, and wireless LAN operation (see the following figure and table).

Status LEDs

A – Power LED
B – Battery LED
C – Hard Drive LED
D – Wireless LAN LED

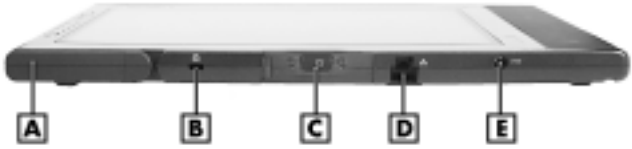
Tablet PC Status LEDs

LED Name	Power Source	LED State	Status
Power LED	AC adapter or battery	Green	Power is on; normal operation.
	AC adapter or battery	Green, blinking	Tablet PC is in suspend mode; settings saved to RAM.
	Battery	Yellow	Battery warning – battery power is at 8% or less.
	Battery	Yellow, blinking	Battery warning – battery power is at 8% or less and tablet PC is in suspend mode.
	Battery	Amber	Battery low – battery power is at 3% or less.
	Battery	Amber, blinking	Battery low – battery power is at 3% or less and tablet PC is in suspend mode.
	--	Off	Tablet PC power is turned off.
Battery LED	AC adapter	Amber	Battery is charging (with power on, tablet PC is in suspend mode, or power is off).
	AC adapter	Amber, blinking	Battery error (with power on, tablet PC is in suspend mode, or power is off).
Hard Drive LED	AC adapter or battery	Green	Hard drive activity.
	AC adapter or battery	Off	Hard drive is inactive.
Wireless LAN LED	AC adapter or battery	Green	Wireless LAN function is switched on. Operation with AC adapter is recommended.
	AC adapter or battery	Off	Wireless LAN function is not on.

On the Left Side of the Tablet PC

The left side of your NEC Versa LitePad tablet PC provides the features shown in the following figure. Feature descriptions follow the figure.

Left side features



A – Wireless LAN Antenna
B – Kensington Lock Slot
C – VGA Port (behind cover)
D – LAN Port
E – Power Port

- Wireless LAN Antenna — Pivot the wireless LAN antenna away from the tablet to adjust communication with your LAN.
- Kensington® Lock Slot — Attach a Kensington security lock or other compatible lock to this slot to secure the tablet PC from theft.
- VGA Port — Use this 15-pin port to attach an external monitor to your PC tablet. With an external monitor attached, use the Fn and Rotate Screen buttons to toggle between LCD and Simultaneous LCD/CRT video modes (see the table "Tablet PC Switches and Buttons" in this chapter).
- LAN Port — Use this port to connect the system to a local area network (LAN).
- Power Port — Attach the AC power adapter that comes with your system to this port. Plug the AC adapter power cable into the AC adapter and into an AC power source.

  The AC power adapter uses a standard 115-Vac or 230-Vac grounded power source. Keep the system connected to the AC power adapter and an AC power source whenever possible to keep the battery pack and internal CMOS battery charged.

On the Right Side of the Tablet PC

Features on the right side of the NEC Versa LitePad tablet PC are shown in the following figure. Feature descriptions follow the figure.

Right side features

A – Headphone Jack
B – Microphone In Jack
C – USB Ports
D – USB Power Port
E – CF Card Eject Button
F – CF Card Slot
G – Slim Pen

- Headphone Jack — Lets you plug in stereo headphones. Plugging in headphones disables the built-in system speaker.
- Microphone In Jack— Allows you to connect an external microphone for monophonic recording or amplification through the unit.
- USB Ports — Allows you to easily and conveniently connect a USB-equipped peripheral device to each of these ports. You can connect the USB keyboard, USB mouse, and USB CD-ROM drive that ship with the NEC Versa LitePad tablet PC. You can also connect an optional USB CD-R/RW drive and other USB devices such as a USB diskette drive, digital camera, scanner, and printer.

  One USB port has an external power port to support a USB device requiring a DC out jack.

  See “USB Devices” in Chapter 5 to connect the external CD-ROM drive that comes with your tablet PC and to connect other USB devices to the system.

- CF Card Slot — Allows you to insert a Type I or Type II CompactFlash™ (CF) Card into this slot for connection to a wide variety of options, such as flash memory, personal data assistants (PDAs), and video cameras.
- CF Card Eject Button — Press this button to release a CF Card.
- Slim Pen — Use this slim (5 mm) electronic pen as you would a pen on paper. You can use the pen as your input device to write, sketch, enter data, and execute programs. This electromagnetic pen requires no battery.

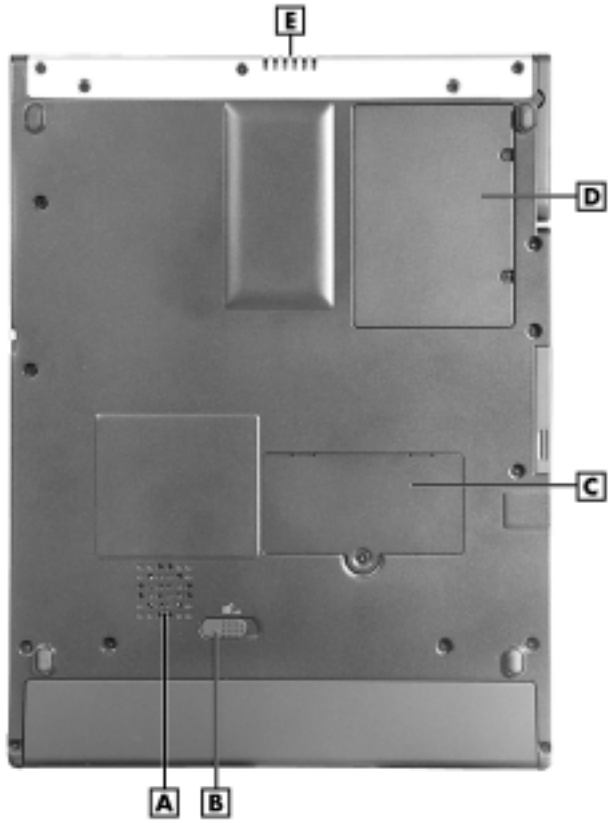
  Store the slim pen in its tablet pen holder so you always have it when you need it.

Note Two pens come with your tablet PC, a slim pen and a clip pen. Store the slim pen in the tablet PC pen holder. See "Tablet Pens" in this chapter and "Pen Operation" in Chapter 2 for more information about these pens.

On the Back of the Tablet PC

The back of the NEC Versa LitePad tablet PC features memory and hard drive bays, a battery release button, speaker, and vents (see the following figure). Descriptions follow the figure.

Back features



A – Speaker
B – Battery Release Button
C – Memory Module Bay
D – Hard Drive Bay
E – Vents

- Speaker — Provides monophonic sound from your audio files.
- Battery Release Button — Releases the installed battery pack. Slide the button to release the battery pack. For information about removing, installing, and using the battery pack, see Chapter 2.
- Hard Drive Bay — Contains the hard drive.
- Memory Module Bay — Contains the SDRAM memory module. See Chapter 5 for memory upgrade information.
- Vents — Allow your tablet PC to cool properly and maintain a safe operating environment.

⚠ CAUTION Do not block the vents while the tablet PC is in use.

About Your Tablet PC Accessories

Your NEC Versa LitePad tablet PC comes with the following accessories:

- AC adapter and power cable
- Tablet stand
- Tablet pens
- USB keyboard
- USB mouse
- USB CD-ROM drive.

See the following sections for information about these accessories.

AC Adapter and Power Cable

Use the AC adapter and power cable that comes with your NEC Versa LitePad tablet PC to run your tablet PC on alternating current (AC) power or to recharge the installed battery pack.

Keep the battery pack charged so you can use your tablet PC just about anywhere. See “Connecting the AC Adapter” and “Battery Operation” in Chapter 2 for AC adapter and battery information.

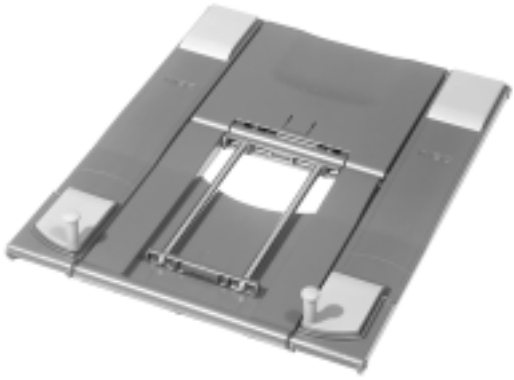
AC adapter and power cable

A – AC Adapter Cable
B – AC Adapter
C – Power Cable

Tablet Stand

The tablet stand provides a place to put your tablet PC for working, viewing, presentations, and for easy cable connections. The tablet stand folds up and is easily portable, making it easy to use the stand for working or presentations away from your desk.

Tablet stand



You can set up the tablet stand for portrait or landscape viewing. The stand also accommodates cable connections in either viewing mode.

See “Stand Setup” in Chapter 2 to set up the tablet stand.

Tablet Pens

Your NEC Versa LitePad tablet PC comes with two pens:

- Slim pen — a 5-mm digital pen with a tip and a side button for writing, sketching, entering data, and executing programs directly from the tablet screen. This slim pen comes in the tablet PC pen holder (see “On the Right Side of the Tablet PC” in this chapter).
- Clip pen — a 9-mm digital pen with a pressure-sensitive tip, a side button, and a pen clip. This pen features a replaceable tip. Five replaceable tips and a tip grip ring come with the pen.

These pens feature battery-free, cordless operation. Pressure from your hand transmits information from the pressure sensitive pen tip to the tablet screen.

See Chapter 2 for information about using these pens and for changing the clip pen tips.

Keyboard

The NEC Versa LitePad tablet PC keyboard is a slim, space-saving keyboard with the following features:

- Standard QWERTY-key layout
- Status LEDs (Num lock, Caps lock, Scroll lock, and Fn)
- Sleep button at the top of the keyboard. Press this button to put the Versa LitePad tablet PC into a Standby power-saving sleep mode.

  Slide the power switch on the tablet PC to get your system out of Standby mode.
- Function keys — Twelve function keys, **F1** through **F12**, are available on the NEC Versa LitePad tablet PC keyboard. Function keys are application-driven, so their function varies according to the application in use. See the specific application's user guide for information about how each function key works within the application you use.
- Windows Keys — Use the following two keys to facilitate your work.

  Shortcut/Application key – provides quick access to shortcut menus. (This key acts like a right mouse button.)

  Floating Window key – displays the Start menu.

- Typewriter Keys — Typewriter keys (also called *alphanumeric* keys) are used to enter text and characters.
- Control Keys — **Ctrl**, **Alt**, **Fn**, and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, "Press **Ctrl C**" means to hold down the **Ctrl** key and type the letter **C**. Key combinations work specific to the application you are running.

- Cursor Control Keys — Cursor control keys let you position the cursor on the screen where you want. On the screen, the cursor is a blinking underline, block, or vertical bar depending on the application. The cursor indicates where the next text typed is inserted.
- Embedded Numeric Keypad — The keyboard has an embedded nummeric keypad (calculator key pad) within the alphanumeric keys. These keys operate with the numeric lock (NumLk) and Fn keys. With Fn on and NumLk off, the pad acts like cursor control keys. With Fn and NumLk on, the pad acts like a numeric keypad. With both Fn and NumLk off, these keys act as normal typewriter keys.

Mouse

A mini USB three-button optical wheel mouse comes with the NEC Versa LitePad tablet PC. Connect the mouse to a USB port on the tablet PC.

Use the optical mouse on all surfaces. The optical sensor allows smooth consistent cursor movement. And there's no mouse ball to dust or clean.

2

Getting Started

- Stand Setup
- Cable Connections
- Startup
- Tips for Working
- Pen Operation
- Battery Operation
- System Care

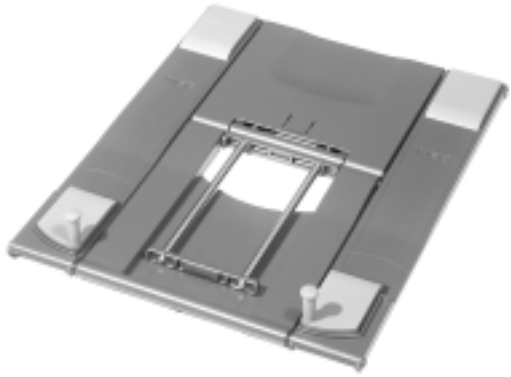
Use your NEC Versa LitePad tablet PC as a stand-alone tablet or as a full-featured computer. See the following sections to:

- set up the stand in portrait or landscape orientation
- connect the AC adapter for charging the battery pack and for using the tablet PC with AC power
- connect standard accessories (keyboard, mouse, and CD-ROM drive)
- start up the tablet PC
- find tips for working with your tablet PC
- use the tablet PC pens
- remove, replace, and use the battery pack
- care for your tablet PC.

Stand Setup

Set up the tablet stand to use your NEC Versa LitePad tablet PC at your desk or for presentations away from your desk.

Tablet stand (flat position)



You can set up the tablet stand for landscape or portrait viewing. The stand accommodates cable connections in either viewing mode. See the following procedures for setup information.

See also the procedures for folding up the stand for storage or for working somewhere else.

Note Press the Rotate Screen button on the NEC Versa LitePad tablet PC to change the screen display orientation (see “On the Front of the Tablet PC” in Chapter 1).

You need to calibrate the pen for each screen orientation — landscape and portrait (see “Pen Operation” in this chapter).

Stand setups with the tablet PC

A – Portrait Setup **B** – Landscape Setup

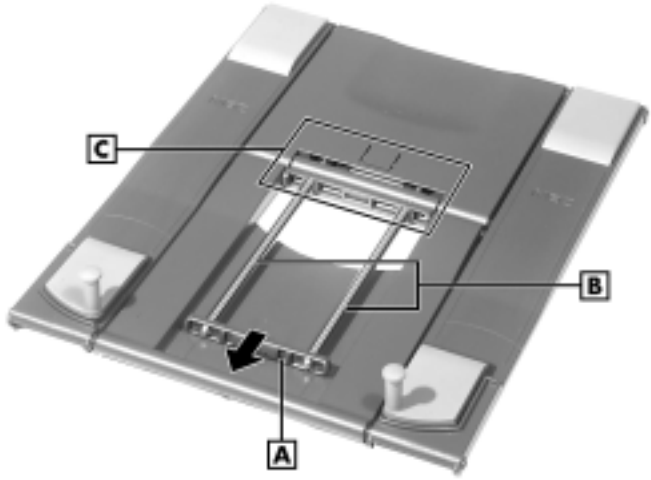
Setting Up the Stand for Landscape Display

The default tablet PC screen display is landscape orientation. The tablet stand setup for landscape display provides a lower, stable height for the tablet PC in this wider orientation.

Use the following procedure to set up the stand for landscape display.

1. Release the rails from the locked position by pulling the tabbed bar towards the front of the stand.

Releasing the rails

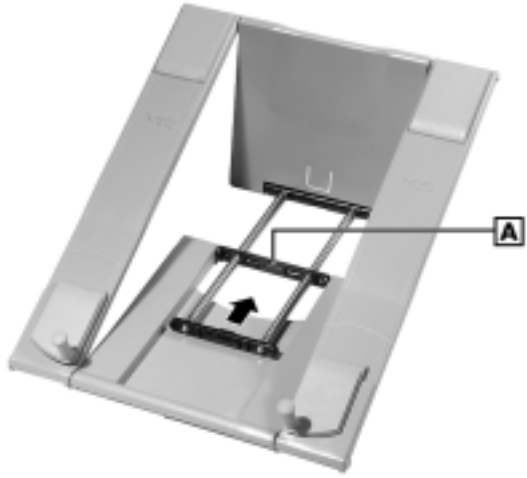


A – Tabbed Bar
B – Rails
C – Rails secured in locking tabs at the back of stand

2. Lift the top end of the stand off of the desk or table.

3. Slide the rails back until the tabbed bar is secured in the bar with the slot.

Adjusting the rails for landscape display

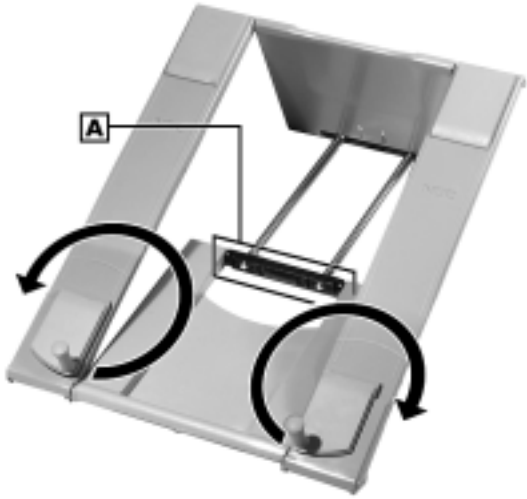


A – Bar with Slot

4. Check that the tabbed bar is secured in the slotted bar (see the following figure).

5. Pivot the support posts outward.

Positioning the support posts for a landscape setup



A – Secured Bars

6. Place the tablet PC on the support posts as shown in the following figure.

⚠ CAUTION For stability and to prevent damage to the tablet PC, always use the landscape stand setup for the landscape orientation of the tablet PC.

Positioning the tablet PC for landscape display

Note To fold up the stand for storage or for working somewhere else, see “Folding Up the Stand from Landscape Display” in this chapter.

Setting Up the Stand for Portrait Display

Use the following procedure to set up the stand for portrait screen display.

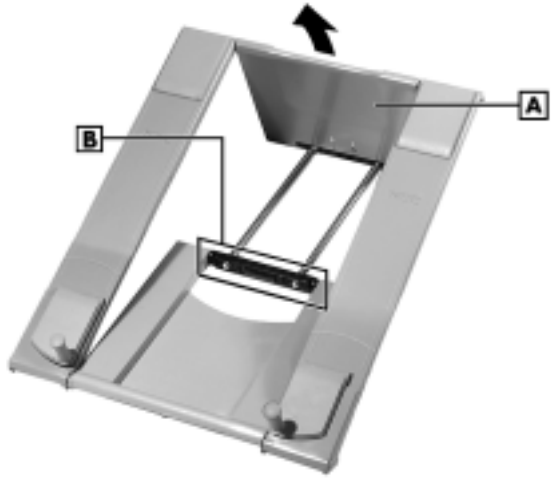
1. Set up the stand for landscape display (see the earlier procedure, “Setting Up the Stand for Landscape Display”).
2. Pivot the support posts inward and down.

Starting from landscape setup (support posts down)

3. Keeping the locking bars secured, lift the top panel up until the rails are in a straight line with the top panel (see the following figures).

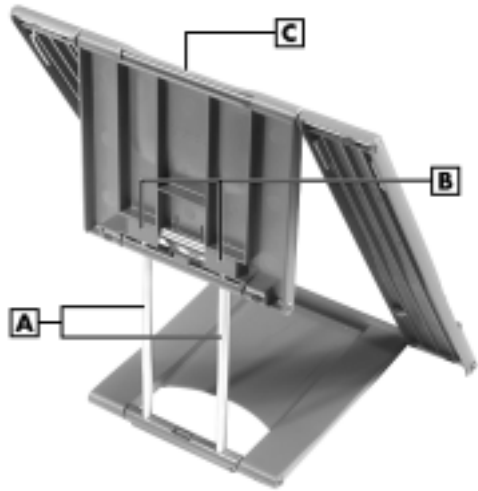
   Then press down on the top panel to lock the rails into the tabs at the back of the top panel.

Lifting the top panel



A – Top Panel **B** – Secured Bars

Locking the top panel in place



A – Rails in line with top panel **C** – Press top panel downward
B – Locking Tabs

Looking at the portrait display position

4. Place the bottom of the tablet PC on the support posts.

Positioning the tablet PC for portrait display

⚠ CAUTION Only use the portrait stand setup position for the portrait orientation of the NEC Versa LitePad tablet PC.

For stability and to prevent damage to the tablet PC, always use the landscape stand setup for the landscape orientation of the tablet PC.

Note To fold up the stand for storage or for working somewhere else, see "Folding Up the Stand from Portrait Display" in this chapter.

Folding Up the Stand from Landscape Display

To fold up the stand for portability or storage, follow these steps:

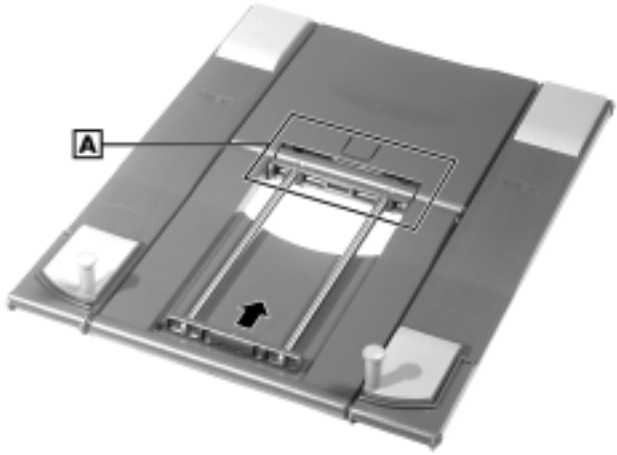
1. Pivot the support posts inward and down.
2. Slide the tabbed bar towards the front of the base.

Note Be sure to slide the tabbed bar on top of the base. Don't let the bar slide under the base.

Folding up the stand from landscape setup

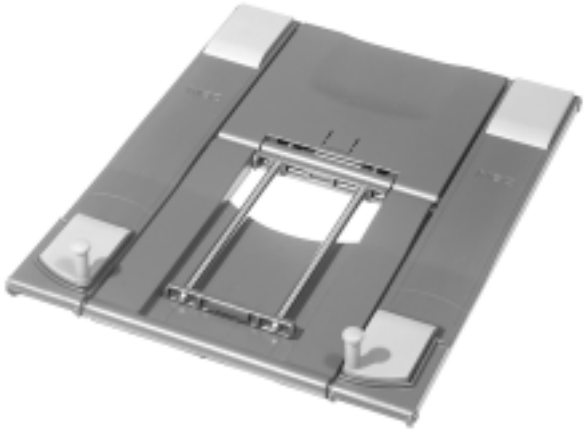
3. Push the tabbed bar towards the top panel to lock the rails and secure the stand in the flat position.

Locking the rails



A – Rails secured in locking tabs at the back of the stand

Looking at the folded and locked stand



Folding Up the Stand from Portrait Display

To fold up the stand for portability or storage, follow these steps:

1. Holding the base and keeping the locking bars secured, lift the top panel up to release it from the locking tabs on the back. Pivot the top panel towards the rear.

Folding up the stand from portrait setup

A – Lift top panel and pivot down

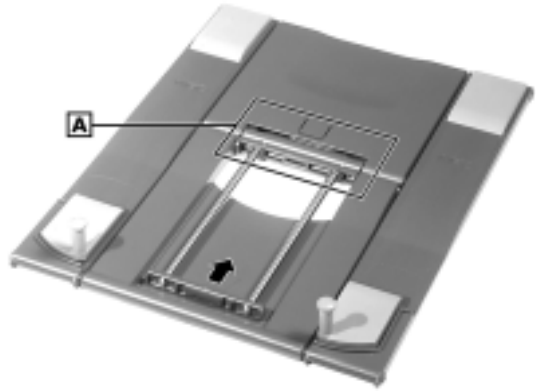
2. Slide the tabbed bar towards the front of the base.

Note Be sure to slide the tabbed bar on top of the base. Don't let the bar slide under the base.

Folding up the stand from landscape setup

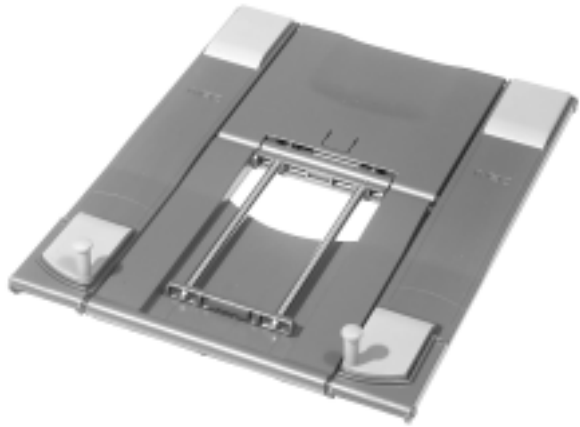
3. Push the tabbed bar towards the top panel to lock the rails and secure the stand in the flat position.

Locking the rails



A – Rails secured in locking tabs at the back of the stand

Looking at the folded and locked stand



Cable Connections

To run your tablet PC on AC power and to charge the installed battery, connect the AC adapter.

⚠ CAUTION To prevent data loss, fully charge the battery pack before running the tablet PC on battery power. See the following section, "Connecting the AC Adapter," to charge the battery.

To use your tablet PC as a full-featured PC, connect the AC adapter, USB keyboard, mouse, and CD-ROM drive that come with the system. See the following sections for connection information.

Connecting the AC Adapter

Connect the AC adapter and power cable that come with your tablet PC to run your system when an AC outlet is available.

Note Keep the AC adapter connected whenever possible. When connected, the AC adapter charges the battery pack, whether the tablet PC is powered on or off.

Connect the AC adapter as follows.

1. Connect the AC adapter cable to the tablet PC power port.
2. Plug one end of the AC power cable into the AC adapter and the other end into a properly grounded 120- or 240-volt, 50- or 60-Hz wall outlet.

Connecting the AC adapter

⚠ WARNING Do not attempt to disassemble the AC adapter. The AC adapter has no user-replaceable or serviceable parts inside. Dangerous voltage in the AC adapter can cause serious personal injury or death. The AC adapter is intended for use with a computer and must meet EN609050 standards.

⚠ CAUTION Do not cover or place objects on the AC adapter. Keeping the adapter clear of objects lets the adapter cool properly during use.

Only use the AC adapter that comes with your NEC Versa LitePad tablet PC. Although other adapters look similar, using them can damage your system.

Note For information about charging and using the battery pack, see “Battery Operation” in this chapter.

Connecting the USB Keyboard and Mouse

Connect the USB keyboard and mouse to use your tablet PC as a full-featured PC. Simply plug these devices into an available USB port on your tablet PC.

See “On the Left Side of the Tablet PC” in Chapter 1 for USB port locations.

Note The first time you power on the tablet PC, you need to use the keyboard and mouse to complete the setup for the Microsoft Windows XP Tablet Edition operating system.

Connecting the USB CD-ROM Drive

Connecting the USB CD-ROM drive that comes with your tablet PC is easy. Simply plug the USB cable that comes with the drive into the back of your CD-ROM drive and into a USB port and power port on your tablet PC.

See “USB Devices” in Chapter 5 for drive features and installation information.

⚠ **CAUTION** NEC Solutions America recommends that you always operate your system on AC power when using an external device such as a CD-ROM drive.

Startup

See the Quick Setup card that comes with your NEC Versa LitePad tablet PC to power on the system for the first time. The first time you power on the system, the Windows operating system setup requires the connection of a keyboard and mouse to complete the setup.

To power on the tablet PC, slide the power switch. The power LED lights green to indicate system power is on. After a short delay, Windows starts up and displays the Windows desktop.

For additional information about power button features and power LED status, see Chapter 1, “Introducing the NEC Versa LitePad Tablet PC.”

⚠ CAUTION To prevent data loss, fully charge the battery pack before running the tablet PC on battery power. See “Connecting the AC Adapter” in this chapter to charge the battery.

After you start up the system, do the following:

- Run the Windows Tablet PC Tutorials.
  Run these tutorials to learn about using the keyboard Input Panel, writing pad Input Panel, speech Input Panel, and to take handwritten notes in Journal.

  You can also learn about using the tablet PC and pen by tapping the Windows Start button and selecting the “Get Going with Tablet PC” option.

- Calibrate your pen and set other tablet options.
  Double tap the Tablet and Pen Settings icon in the Windows system tray to display the Tablet and Pen Settings screen. You can set options in the Settings, Display, Tablet Buttons, and Pen Options menus. To calibrate your pen, select the Settings menu and select calibration options.

- Adjust screen brightness.
  Double tap the Tablet and Pen Settings icon in the Windows system tray. Select the Display tab to display Screen brightness settings. You can adjust screen brightness for running the system on AC power and for battery power.

Tips for Working

Follow these basic tips while working:

- Use a light touch on the tablet screen.
- Set up the NEC Versa LitePad tablet PC with the tablet screen, keyboard, and mouse at a comfortable height. When using the keyboard, keep your forearms parallel to the floor. Your wrists should be relaxed and straight.
- While using the keyboard, mouse, and pen, keep your shoulders and arms as relaxed as possible.
- Take regular breaks from the tablet PC to rest your eyes. Perform stretching exercises to relax your fingers, hands, wrists, forearms, and shoulders.

See Appendix A, "Setting Up a Healthy Work Environment," for more information.

Pen Operation

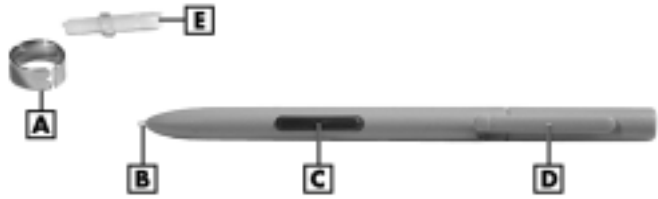
Two pens ship with the NEC Versa LitePad tablet PC (see "Tablet Pens" in Chapter 1):

- Slim pen
- Clip pen.

Slim pen (5 mm)

A – Pen Tip
B – Pen Button
C – Grip End

Clip pen (9 mm)



A – Tip Grip Ring
B – Pen Tip
C – Pen Button
D – Clip
E – 5 Spare Tips

The NEC Versa LitePad tablet pens feature battery-free, cordless operation. Use them to write or sketch with digital ink on the tablet screen, select items on the screen, or to input data.

Your tablet PC supports handwriting recognition. When you use a tablet pen to write directly on the screen and create digital ink, your tablet PC can translate your handwriting into keyboard-style text.

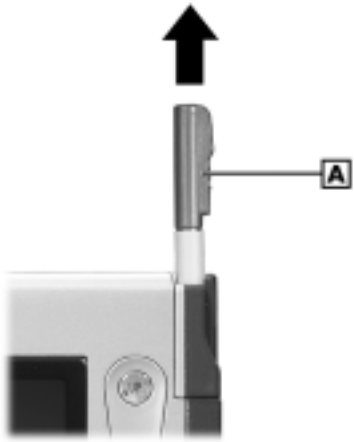
Pressure from your hand transmits information from the pressure sensitive pen tip to the tablet screen.

The button on the side of the pen lets you operate the pen as a mouse with a right click. You can disable/enable this action in the Windows operating system.

Using the Pens

The slim pen comes stored in the tablet PC pen holder. To use the slim pen, pull it out from its holder. When you are not using the pen, store it in the tablet PC holder so it's always there for you to use.

Removing the slim pen from the tablet PC



A – Slim Pen — grip end

You can use the tablet pen like a mouse. Equivalent pen-mouse actions are as follows.

- **Single tap the tablet screen** — equivalent to a single click of the primary mouse button.
- **Double tap the tablet screen** — equivalent to a double click of the primary mouse button.
- **Press and hold the pen on the tablet screen** — equivalent to a click of the right mouse button (right click).
- **Point/hover** — equivalent to pointing with the mouse.
- **Hold pen button and tap tablet screen** — equivalent to right mouse button (right click); quicker than the "press and hold" pen action.

Note Tip for using the pen — watch the cursor on the tablet screen rather than the pen point.

Try all of the pen features and decide which you prefer. If you find the double tap or any of the other features difficult to use, go to the next section for general directions about adjusting pen properties.

Setting Pen Options

You can set pen actions and pen buttons in Windows. Double tap the Tablet and Pen Settings icon in the Windows system tray.

Select the Settings menu to calibrate pen accuracy.

Note You need to calibrate the pen for each screen orientation (landscape or portrait).

Select the Pen Options menu to set pen actions to work as a mouse and to set the pen button to right click.

Replacing Clip Pen Tips

Five tips and a tip grip ring come with the clip pen (9 mm). When you notice pen performance degrading, replace the pen tip as follows.

1. Using the tip grip ring, press the ring to grip the pen tip in the ring opening. Pull the tip out of the pen.
2. Insert the new pen tip. The flat end of the tip goes into the pen.

Battery Operation

Your NEC Versa LitePad tablet PC comes with a rechargeable 4-cell lithium ion (Li-Ion) battery pack already installed. The battery pack provides the main power source when you are operating the tablet PC on battery power.

For information about installing or removing the battery, see the section, “Replacing the Battery” later in this chapter. For information about using the battery pack, see the next section.

Note See “Windows Power Management” in Chapter 4 to fully utilize battery power in your NEC Versa LitePad tablet PC.

Using the Battery Pack

See the table “Tablet PC Status LEDs” in Chapter 1 for a description of the Power and Battery LED status. Also see “Determining Battery Status” and “Identifying Low Battery Status” in this chapter for battery power information.

⚠ CAUTION To prevent data loss, fully charge the battery pack before running the tablet PC on battery power (see “Connecting the AC Adapter” earlier in this chapter).

⚠ WARNING To prevent accidental battery ignition or explosion, adhere to the following:

- Keep the battery away from extreme heat.
- Keep metal objects away from the battery connectors to prevent a short circuit.
- Always run the tablet PC with a battery installed.
- Make sure the battery is properly installed in the battery bay.

Keep the following in mind when using the battery pack.

- Use only the battery designed for your NEC Versa LitePad tablet PC. Mixing other manufacturers' batteries, or using a combination of very old and new batteries can deteriorate battery and equipment performance.
- Turn off power to the system after use. Keeping system power on can degrade battery performance and shorten battery life.
- Clean the battery connectors with a dry cloth when they get dirty.
- Keep the battery out of the reach of children.

Determining Battery Status

Your tablet PC provides tools to help you keep track of the battery's power level. If your system is configured to display the Power icon on the taskbar, the following taskbar icons appear:

- An electrical plug appears when the system is connected to an AC power source.
- A battery icon always appears when the system is not connected to an AC power source.

To show the Power icon on the taskbar when connected to AC power, tap the Windows Start button, select Control Panel, select Performance and Maintenance, and select Power Options. From the Power Options Properties window, select the Advanced menu and select the option "Always show icon on the taskbar."

Use the system's power meter to determine battery status. Access the system's power meter in the following ways:

- If the Power icon is configured to display in the taskbar, point to the Power icon to display the remaining battery power.
- Double tap the Power icon on the taskbar to open the power meter.
- Go to Start, Control Panel, select Performance and Maintenance, and select Power Options. Select the Power Meter tab. Power status displays the total battery power remaining.

Identifying Low Battery Status

When battery power is low (8% or less), the power LED lights yellow (blinks in Standby mode). When battery power is very low (3% or less), the power LED lights amber (blinks in Standby mode). When your system is in a low battery status, do one of the following:

- Save your work, power off the system, remove the spent battery, and replace it with a fully charged battery.
- Leave the spent battery in the system and connect your NEC Versa LitePad tablet PC to the AC adapter and a wall outlet.

Returning the Battery to its Normal State

If battery performance drops, for example, you experience shorter work times, try one of the following procedures to improve battery performance:

- Remove and reinstall the battery in your NEC Versa LitePad tablet PC and fully recharge the battery (to 100%).
- Refresh the battery using the Battery Refresh function in the BIOS Setup utility (see “Standard Menu” in Chapter 3).

Extending Battery Life

While on the road, it is important to be aware of the simple things you can do to extend the life of the system’s battery:

- Keep the brightness setting low by adjusting the screen brightness in the Tablet and Pen Settings menu. To adjust screen brightness, double tap the Tablet and Pen Settings icon in the Windows system tray. Tap the Display tab to select Screen brightness settings.

  You can adjust screen brightness for running the system on AC power and for battery power.
- Run storage devices, such as the USB CD-ROM drive, on AC power only.
- Turn off the system when you finish using it.

Note NEC Solutions America recommends that you always operate your system on AC power when using any external device.

Replacing the Battery

The following symptoms indicate that battery life is nearing an end. Replace a battery that displays these symptoms.

- Shorter work times.
- Discoloration, warping.
- Hot to the touch.
- Strange odor.

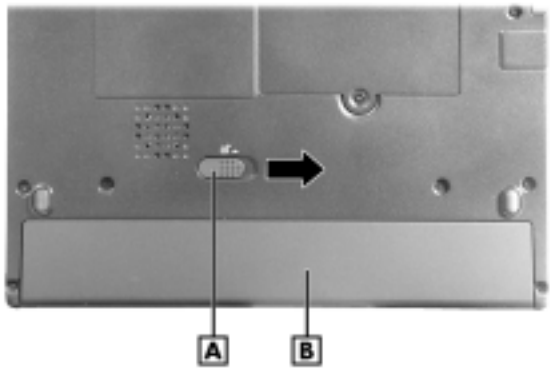
Replace the battery installed in your NEC Versa LitePad tablet PC as follows.

⚠ CAUTION Only use batteries that are designed for your NEC Versa LitePad tablet PC. Installing another manufacturer's battery or using a combination of very old and new batteries can deteriorate battery and equipment performance.

1. Save your files, exit Windows, and turn off system power.
2. Turn over the tablet PC.

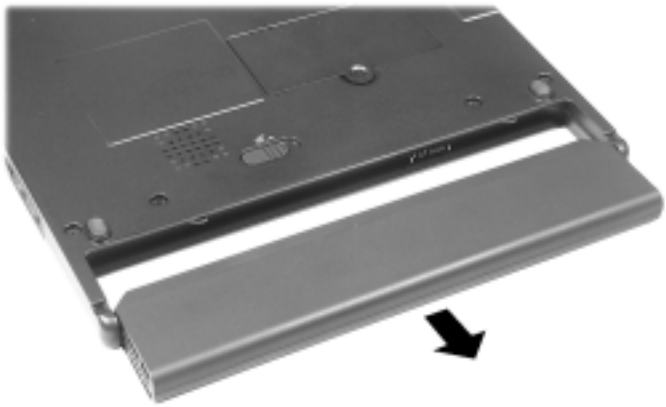
3. Remove the battery pack as follows.
   - Slide the battery release button to the right and hold firmly.
   - While holding the release button, slide the battery out of the battery bay.

Releasing the battery pack



A – Battery Release Button **B** – Battery Pack

Removing the battery pack



4. Insert the new battery pack as follows:

   - Align the battery connector and slots with the battery bay connector and tabs.

Battery connector and tabs

A – Battery Slots **B** – Battery Connector

- Align the grooves on the sides of the battery with the rails in the battery bay.
- Slide the battery into the battery bay. Press the battery into the bay connector to secure it.

Installing the battery pack

A – Battery Groove **B** – Rail

5. Turn the tablet PC over.

Charging the Battery

Charge the battery pack by simply connecting your NEC Versa LitePad tablet PC to an AC power source.

Note During charging, keep the environmental temperature between 32°F and 104°F (0°C to 40°C).

To monitor the charging activity, observe the battery LED on the front of the tablet PC. The battery LED lights as follows:

- Lights amber when the battery is charging.
- Blinks amber if the battery encounters an error while charging.

Note See “Determining Battery Status” in this chapter to display the Power icon in the system tray. You can quickly view the battery charging status from this icon. Also, see the table “Tablet PC Status LEDs” in Chapter 1 for a detailed description of LED status.

Taking Precautions

To prevent accidental battery ignition, rupture, or explosion, adhere to the following precautions.

⚠ WARNING There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

To avoid personal injury and property damage, read these battery precautions on handling, charging, and disposing of Li-Ion batteries.

- Keep the battery away from heat sources including direct sunlight, open fires, microwave ovens, and high-voltage containers. Temperatures over 140º F (60ºC) may cause damage.
- Do not drop or bump the battery.
- Do not disassemble the battery.
- Do not solder the battery.
- Do not puncture the battery.
- Do not use a battery that appears damaged or deformed, has any rust on its casing, is discolored, overheats, or emits a foul odor.
- Keep the battery dry and away from water.
- Keep metal objects away from battery connectors. Metal objects in contact with the connectors can cause a short circuit and damage.

If the battery leaks:

- If the battery leaks onto skin or clothing, wash the area immediately with clean water. Battery fluid can cause a skin rash and damage fabric.
- If battery fluid gets into eyes, DO NOT rub; rinse with clear water immediately and consult a doctor.
- Take extra precautions to keep a leaking battery away from fire. There is a danger of ignition or explosion.

System Care

The NEC Versa LitePad tablet PC is designed to be a durable, dependable system built for extensive use and travel. Follow these guidelines to maintain the condition and performance of your computer.

⚠ WARNING Immediately turn off and unplug the NEC Versa LitePad tablet PC under the following conditions:

- The power cord is damaged or frayed.
- Liquid spills on or into the NEC Versa LitePad tablet PC.
- The system is dropped or the casing is damaged.

Precautions for System Use

Follow these precautions when using your NEC Versa LitePad tablet PC and AC adapter.

- Avoid dropping or bumping the computer or the AC adapter.
- Do not stack heavy objects on the tablet PC, the AC adapter, or the battery.
- Avoid moving the NEC Versa LitePad tablet PC during system operation, especially while the hard disk, diskette drive, or other drive is being accessed.
- When using the AC adapter, make sure the power source falls within the system's compatible range of 100-240 volts and 50 or 60-Hz, AC. Never use the AC adapter if the voltage falls outside of this range. (Watch for this when traveling to other countries.)
- Turn computer power off before attaching or removing non-plug and play devices that are not warm- or hot-swappable.
- Do not push any foreign objects into the NEC Versa LitePad tablet PC bays, connectors, and slots.
- Do not set the tablet PC on top of a magnetized area. Doing so can destroy the data on your hard disk drive. (Some airline tray tables are magnetic.)
- Avoid using the tablet PC or AC adapter for extended periods in direct sunlight.

- Do not use the system in humid or dusty environments.
- Turn computer power off before cleaning it.
- Avoid exposing the NEC Versa LitePad tablet PC or AC adapter to extreme changes in temperature or humidity. If it is unavoidable, allow your tablet PC to adjust to room temperature before use.
- When cleaning the system, use a soft, clean, dry cloth. Avoid wiping the display surface with abrasive material, including rough fabric. Do not use a cleaning solution; this may damage the tablet PC's case.
- If the AC adapter becomes extremely hot, unplug the adapter and let it cool.

Storage Requirements

Store the tablet PC and AC adapter in an environment that meets the following conditions:

⚠ CAUTION If the temperature of the NEC Versa LitePad tablet PC suddenly rises or falls (for example, when you move the system from a cold place to a warm place) vapor condenses inside the system. Turning on the system under this condition can damage the internal system components.

Before turning on the system, wait until the system's internal temperature equalizes with the new environment and any internal moisture evaporates.

- Maintain storage temperatures between -4°F and 104°F (-20°C and 40°C).
- Keep the storage area free from vibration and magnetic fields.
- Keep the system and its components away from organic solvents or corrosive gases.
- Avoid leaving the system and its components in direct sunlight or near heat sources.

Routine Cleaning

Clean or dust your system as follows:

⚠ CAUTION Never use harsh solutions, household cleaners, or spray cleaners that contain caustic materials on the NEC Versa LitePad tablet PC.

These cleaners are usually high in alkalinity, which is measured in pH. Using these cleaners can harm the magnesium surface.

- LCD screen — Carefully wipe the LCD screen with a soft cloth or a screen wipe designed for that purpose. Special screen wipes are available through your local computer dealer.
- System case — NEC Solutions America recommends that you carefully wipe the case with a slightly damp, almost dry cloth.

3

Using the BIOS Setup Utility

- Introducing BIOS Setup
- Entering BIOS Setup
- Checking/Setting System Parameters
- Updating the BIOS
- Checking/Changing Switch Settings

Introducing BIOS Setup

Your NEC Versa LitePad tablet PC comes with a hardware program called the BIOS Setup utility that allows you to view and set system parameters. BIOS Setup also allows you to set password features that protect your system from unauthorized use.

Use BIOS Setup to:

- set the current time and date
- customize your operating system to reflect your computer hardware
- secure your system with a password
- launch the Refresh Battery utility and fully discharge your lithium ion battery pack.

System parameter information, for example, date, time, drive, and security settings, is stored in the system's complementary metal oxide semiconductor (CMOS) memory.

Entering BIOS Setup

Connect your keyboard or use your tablet pen to run the BIOS Setup utility. You can use some of the tablet PC buttons to access the BIOS Setup utility and to select menu options.

Access the BIOS utility at power-on. Just press the **DOWN** button when the following prompt appears.

```
Press <DOWN> to Enter BIOS Setup
```

When you press the **DOWN** button to enter BIOS Setup, the system interrupts the Power-On Self-Test (POST) and displays the Standard CMOS Setup menu. You can view and set system parameters from this menu and BIOS Setup's other menus. See the following sections for a description of how to use the BIOS Setup utility.

If the system detects an error during POST, it prompts you with a double beep and a message: "Press DOWN to enter Setup."

Standard CMOS Setup Menu

After you press **DOWN**, the system displays the BIOS Setup Utility Standard CMOS Setup menu, similar to the following menu.

Standard CMOS Setup menu

BIOS-VBIOS-EC VERSION	XXXXXXXX-XXXX-XXXX
System Memory	256MB
Language	[English]
System Date	[Wed 01/08/2003]
System Time	[10:46:23]
>Pri Master	[Hard Disk]
Boot Sector Virus Protection	[Disabled]
Battery Refresh	[Enter]

Use the up and down arrow keys on your keyboard to move through the BIOS Setup menu items or use the **UP** and **DOWN** tablet PC buttons. See "Using Keys and Buttons" in this chapter for a list of keys and buttons you can use to run the BIOS Setup utility.

Looking at Screens

BIOS setup screens have two main areas :

- Parameters — The left side of the screen. This area lists parameters and their current settings.
- Available Options and Help — The right side of the screen. This area lists alternate settings and Help text for each parameter.

Options that are grayed out are not available for the current selection.

Using Keys and Buttons

The following table lists the keyboard keys, pen-based keys, and tablet buttons for running BIOS Setup and provides their functions.

BIOS Setup Key and Button Functions

Key	Pen	Button	Function
F1	F1		Displays key legend for moving the cursor and selecting parameters.
Esc	ESC	Esc	Exits a sub-menu or exits the current screen and prompts “Discard changes and exit setup?”
↑↓	↑↓	UP DOWN	Moves the cursor between the displayed parameters.
←→	←→		Selects the Setup menu screen.
–/+	–/+		Changes the value for the selected item/field.
Tab		Enter	Moves the cursor between subfields. For example, for System Time, Tab moves the cursor from hour to minute to second.
Home			Goes to the top of the screen
End			Goes to the bottom of the screen.
Enter	ENT	Enter	Brings up a parameter sub-menu.
	FnA		Opens an alpha numeric keypad for entering letters and numbers. SHT allows upper and lower case letters.
F7	F7		Discards changes.
F9	F9		Loads optimal default settings.
F10	F10		Saves and exits the BIOS Setup utility.

Checking/Setting System Parameters

The BIOS Setup consists of a number of screens, each representing a specific area of the BIOS. The following tables list the BIOS parameters, their factory default settings, alternate settings, and a description of each setting. See the item-specific help that appears on each Setup screen for more details.

The BIOS Setup utility has a menu for each of the following areas:

- Standard CMOS Setup
- Advanced CMOS Setup
- System Security Setup
- Boot Device Setup
- Exit Options.

Resetting System Parameters

To reset all parameters to the optimal default settings, press or tap **F9**, use the arrow keys to select **OK** to load the defaluts or **Cancel** and press **Enter**.

Standard Menu

Use the Standard menu to view the system memory and language, to modify the system date, system time, drive parameters, set boot sector virus protection, and to run the battery refresh utility.

Standard CMOS Setup Menu

Parameter	Default Setting	Alternate Setting(s)
BIOS Version		(automatically detected)
System Memory		(automatically detected)
Language	English	Japanese
System Date	Mm:/dd:/yyyy	
System Time	hh:/mm:/ss	

Standard CMOS Setup Menu

Parameter	Default Setting	Alternate Setting(s)
Internal HDD	Auto	
Boot Sector Virus Protection	Disabled	Enabled
Battery Refresh	Enter	

- BIOS Version — Displays the version number of the current BIOS Setup utility and firmware.
- System Memory — Displays the amount of system memory currently installed in your system.
- Language — Designates the language displayed by the BIOS Setup utility.
- Date — Sets your NEC Versa LitePad tablet PC calendar month, day and year. These settings remain in memory even after you turn off system power.

  To set the date use the **Tab**, **Shift/Tab**, or **Enter** keys to move from field to field. You can also use the **Enter button** to move from field to field.
- System Time — Sets the time; enter the current hour, minute, and second in *hr:/min:/sec*, 24-hour format.

  To set the time, use the **Tab**, **Shift/Tab**, or **Enter** keys to move from field to field. You can also use the **Enter button** to move from field to field.
- Internal HDD — Opens a sub-menu with parameters for the internal hard drive in your system.
- Boot Sector Virus Protection — Enables or disables the write protection of the hard drive boot sector. Enabling protection avoids information by some virus types.

- Battery Refresh — Launches the Refresh Battery utility. The utility fully discharges your battery. Once refreshed, your battery is conditioned to recharge to its full capacity. To recharge the battery, connect your NEC Versa LitePad tablet PC to AC power.

Advanced Menu

Use the Advanced menu to set the following functions.

Advanced CMOS Setup

Parameter	Default Setting	Alternate Setting(s)
USB Legacy Support	Enabled	Disabled
Remote Power on	Enabled	Disabled
Intel® SpeedStep™ Technology	Enabled	Disabled
CPU Power Management	Enabled	Disabled

- USB Legacy Support — When set to Enabled, enables support for a legacy USB device.
- Remote Power On — When set to Enabled, allows the LAN board to wake the system.
- Intel® SpeedStep™ Technology — When enabled, Intel SpeedStep technology is controlled by the operating system or applet. The system works at the optimized performance. When disabled, the system operates in a power conservation mode.
- CPU Power Management — When enabled, allows CPU power management.

Security Menu

Use the Security menu to configure your system for protection against unauthorized access.

System Security Setup

Parameter	Default Setting	Alternate Setting(s)
Supervisor Password Is:	Not Installed	(automatically detected)
User Password Is:	Not Installed	(automatically detected)
Change Supervisor Password	Press Enter	
Change User Password	Press Enter	
Boot Password Required	No	Yes
Set Master HDDs Security Password*	Press Enter	
Set User HDDs Security Password	Press Enter	

*Display of Set Master HDDs Security parameter requires Supervisor Password enabled.

- Supervisor Password Is — Display only. Automatically displays password status.
- User Password Is — Display only. Automatically displays password status.
- Change Supervisor Password — Allows you to set or change the Supervisor password. The Supervisor password allows access to all Setup items.
- Change User Password — Allows you to set or change the User password. The User password allows limited access to Setup items. To enter a User password, a Supervisor password must be enabled.
- Boot Password Required — If set to Yes, requires a password on system startup.

- Set Master HDDs Security Password — Allows you to set or clear the hard drive password. When set, allows hard drive access only from this system. Power must be cycled to lock the hard drive.
- Set User HDDs Security Password — Allows you to set or clear the hard drive password. When set, allows hard drive access only from this system. Power must be cycled to lock the hard drive.

Password Protection

Your NEC Versa LitePad tablet PC supports a password for system security. Keep in mind that you must set the supervisor password before the BIOS Setup utility allows you to set a user password.

Once you set a supervisor password, you must enter it before you can enter BIOS Setup.

To establish password protection for entering the BIOS Setup utility, you must set the supervisor password before setting a user password.

To enter a password, select Set Supervisor Password, press **Enter**, enter the password, re-enter the password to confirm it, and press any key to continue. Repeat the procedure to set the User password.

Note For security, use different passwords for Supervisor and User passwords.

To establish password protection for resuming from Standby or Hibernation modes you must do the following:

- Set a Windows password in Control Panel, Password Properties, Change Passwords.
- Enable the option “Prompt for password when the computer goes off standby” in Control Panel, Power Management Properties, Advanced.

Hard Disk Drive Passwords

Your NEC Versa LitePad tablet PC allows you to establish password protection for the internal hard disk drive. Hard disk drive (HDD) password protection restricts access to the drive, only if the drive is removed from your NEC Versa LitePad tablet PC and installed in another system. You are not prompted to enter your hard disk drive passwords while the drive remains in your current system.

The HDD passwords are written to the system BIOS and to the hard disk drive to ensure that the password protection travels with the drive when moved from system to system.

Establishing Hard Disk Drive Passwords

To establish password protection for your system's hard disk drive you must establish a master password, establish a user password, and enable the established passwords for the internal HDD. Follow these steps to establish HDD passwords and to enable HDD password protection.

⚠ WARNING If you set the master and user password on a hard drive, password security can never be disabled. Passwords can be changed. If the master password is forgotten and the drive is installed in another system, you cannot access the data on the hard drive.

If the hard drive is installed in another NEC Versa system with hard disk drive security enabled, the password must be entered to allow access to the hard drive. **If this NEC Versa system does not support hard disk drive security, you cannot access the data on the hard drive.**

1. Enter the BIOS setup, highlight and select the Security menu.
2. Select Set HDDs Security Password and press **Enter**.

   The system prompts you to enter a master password.
3. Enter a master HDD password and press **Enter**.

   The system prompts you to enter the password again to verify.
4. Enter the master password and press **Enter**.

The system confirms the creation of the master password.

5. Enter a user password and press **Enter**.

   The system prompts you to enter the password again to verify.

6. Enter the user password and press **Enter**.

Changing Hard Disk Drive Passwords

To change hard disk drive passwords, enter the Security Setup, highlight Set Master HDDs Security Password, press **Enter**, and enter the current password that you wish to change. If you enter the current master password, you are prompted to enter a new master password. If you enter the current user password, you are prompted to enter the new user password. If you do not wish to establish a new master or user password, press **Esc** instead of entering a new password.

Note To uninstall the hard disk drive password, enter blank data (just tap **Ent** or press **Enter**) at the prompt to enter a password.

Using Hard Disk Drive Password Protection

To facilitate the transfer of one or more HDDs between systems, establish a single master password (and store the password in a secure place). Forgetting your master password results in the inability to access the data on your hard drive. Establish different user passwords to limit access to specific systems.

WARNING If you set the master and user password on a hard drive, password security can never be disabled. Passwords can be changed. If the master password is forgotten and the drive is installed in another system, you cannot access the data on the hard drive.

If the hard drive is installed in another NEC Versa system with hard disk drive security enabled, the password must be entered to allow access to the hard drive. **If this NEC Versa system does not support hard disk drive security, you cannot access the data on the hard drive.**

With hard disk drive security enabled on the original NEC Versa system, the system boots normally.

If the hard drive is installed in another NEC Versa system with security enabled, you must enter the master password to access the hard disk drive. If the hard drive is installed in another NEC Versa system with security disabled, the system boots with no password required.

Moving the Hard Disk Drive

When a password protected HDD is moved from its original system and installed in another system, error messages appear indicating that the drive is locked. Next, the Security Setup screen appears requiring the user to enter the master password to unlock the drive. Highlight the HDD password line and enter the master password when prompted.

To take advantage of HDD password protection in another system, the system must be equipped with the same HDD password protection feature. To determine if that system has HDD password, check the Security Setup in the BIOS Setup to see if there are provisions for establishing HDD passwords.

Boot Menu

The Boot Device Setup menu allows you to define the boot devices and boot order of system devices.

Boot parameters include:

Boot devices are listed by name, and the order of the names represents the boot order:

- Silent Boot — Enabled (default) displays the logo screen during system boot; Disabled, does not display the logo screen during system boot. “Black” displays a black screen during system boot.
- Network Boot — Enabled allows booting from the network.
- 1st Boot Device Drive — Specifies the boot sequence from the available devices, for example, 2nd Boot device, 3rd Boot device.

Exit Menu

The Exit menu provides the following options:

- Save Changes and Exit — Saves the changes you may have made to the BIOS settings, and exits the BIOS Setup utility. You can use the F10 key for this operation.
- Discard Changes and Exit — Exits the BIOS Setup utility without saving Setup data. The ESC key or button can be used for this operation.
- Discard Changes — Discards changes done so far to any of the setup questions. The F7 key can be used for this operation..
- Load Optimal Defaults — Loads the default values for all the setup options. You can use F9 for this operation.

Updating the BIOS

The BIOS is code transmitted onto your system's microprocessor, or central processing unit (CPU). As indicated in this chapter, you use the BIOS Setup utility to configure your system's software and hardware features. Only use the BIOS Update Diskette for your specific model to update your NEC Versa LitePad tablet PC BIOS.

Note You only need to update the BIOS if NEC makes significant improvements or fixes to the current system BIOS. Your authorized NEC Solutions America dealer or support representative can help you determine this.

To update the system BIOS you must:

- Obtain the BIOS Update
- Prepare the BIOS Update Diskette
- Perform the BIOS Update.

Note You need an external diskette drive and a keyboard to run the BIOS Update utility.

Obtaining the BIOS Update

If you are informed that the BIOS needs an update, contact NEC Solutions America Support Services at **1-800-632-4525** or access the NEC Solutions America Web site, **www.necsolutions-am.com**, to obtain a copy of the BIOS update.

Note If you are using this computer outside the U.S. or Canada, please contact a local NEC office or dealer in your country.

Preparing the BIOS Update Diskette

Before using the BIOS update diskette, you must make the diskette BIOS flash ready. Refer to the **readme.txt** file on the diskette before using the diskette.

Follow these instructions to prepare the BIOS Update Diskette.

Note Preparing the BIOS Update Diskette makes the diskette bootable. This procedure requires a system that has the MS-DOS® operating system available. Microsoft Windows XP does not have an MS-DOS operation. If a bootable disk is required, contact Support Services at NEC Solutions America (see Chapter 9).

1. Scan your hard drive for any computer viruses.
2. Unlock the write protect notch on the diskette, if necessary.
3. Connect the USB diskette drive and insert the diskette into the diskette drive.
4. Type **a:\install** (where a: is the diskette drive) at the DOS prompt and follow the on-screen instructions.

   Install**.**bat copies the DOS system files from your hard drive onto the BIOS Update Diskette to make it BIOS flash ready.

   The system prompts you when the process is complete.
5. Scan the BIOS Update Diskette for computer viruses.

   The diskette is ready for use.

Performing the BIOS Update

Make the following preparations before performing the BIOS update. Before you begin, be sure to:

- Connect the tablet PC to AC power and power on the computer.
- Remove any bootable CDs from any installed USB optical drive.
- Enter BIOS Setup with the DOWN button.
- Check Boot order on the Boot menu to ensure that the USB diskette drive boots before the IDE hard drive.
- Write down what you've done to customize your BIOS settings.
- Exit and save BIOS settings.

Once you have prepared the system for a BIOS update, perform the following steps:

1. Insert the BIOS Update diskette into the diskette drive.
2. Power on the tablet PC with the diskette in the diskette drive. The system boots and automatically loads the utility. Read the message that displays and follow the instructions.
3. Press **Enter** to continue.

   The utility checks the currently installed BIOS version and the diskette's BIOS version. The Main menu appears.
4. Use the arrow keys to highlight the "Display BIOS Version" option on the Main Menu. Use this option to check the currently installed BIOS version and the version of the new replacement BIOS.

   Press any key to return to the Main menu.
5. Highlight the "Install New BIOS" option and press **Enter**.

6. Press **Y** and then press **Enter**. A message informs you of the update progress. Do not restart the system until the you are instructed to restart.

⚠ CAUTION Interrupting the BIOS update during the update process can cause damage to the system.

7. Remove the diskette and press any key to continue. A CMOS Checksum message appears and prompts you to press **DOWN** to enter Setup.
8. Press **DOWN** to enter Setup and restore the default parameter settings.
9. Reconfigure Setup with the custom settings you documented for yourself before beginning this procedure.
10. Press **F10** to save changes and exit Setup.

Checking/Changing Switch Settings

The NEC Versa LitePad tablet PC has a four-position dip switch on the bottom of the tablet PC. Switches are identified as follows:

- Switch 1 — Password Override switch
  The default setting is "OFF." If you forget the password you set in the BIOS Setup utility and you cannot access BIOS Setup or Windows, change the setting to "ON" and your current password is erased.

Note Clearing the password set in the BIOS Setup utility does not clear your Windows password.

- Switch 2 — Logo Select switch
  The default setting is "OFF" for the U.S. logo.
- Switch 3 — Crisis Recovery Boot from Boot Block switch
  The default setting is "OFF" for a Normal boot. The "ON" setting is for a Boot block.
- Switch 4 — Reserved for factory use. Default setting is "OFF."

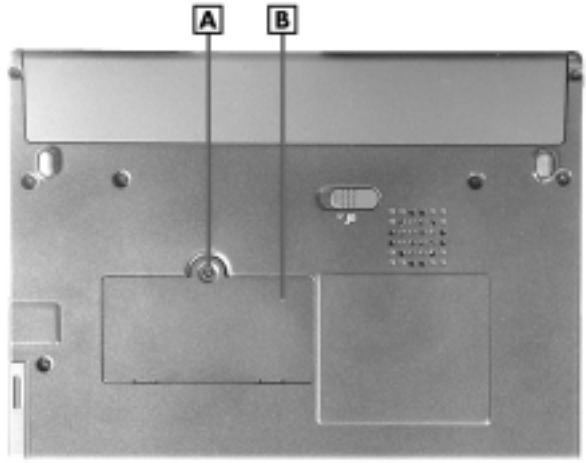
If you set a supervisor or user password in the BIOS Setup utility and then forgot the password, you can clear it.

Use the following procedure to clear the password.

⚠ CAUTION Before handling any internal components, discharge static electricity from yourself by touching a nearby unpainted metal surface.

1. Power off the system, disconnect AC power, and disconnect any peripheral devices.
2. Turn over the tablet PC.
3. Locate the screw securing the memory bay cover to the bottom of the tablet PC. Remove the screw and lift off the memory bay cover.

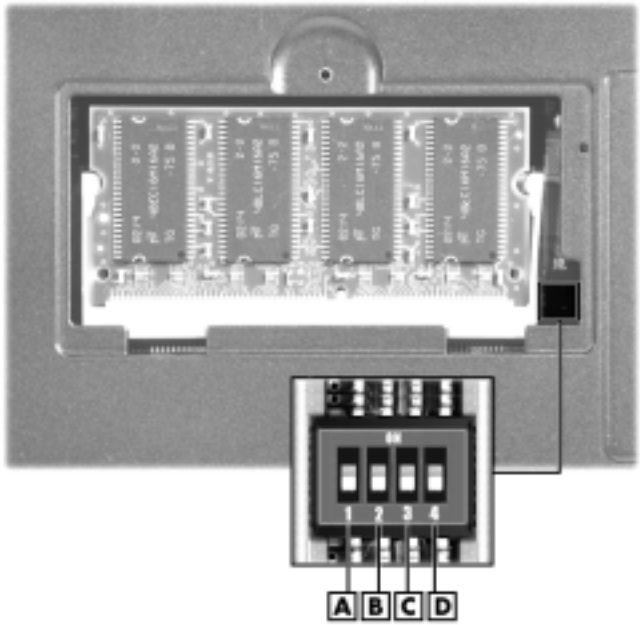
Memory bay cover



A – Memory Bay Cover **B** – Screw

4. Locate the plastic cover next to the memory module as shown in the following figure.

Locating switches



A – Password Override Switch
B – Logo Select Switch
C – Crisis Recovery Boot Switch
D – Reserved Switch

5. Using a fine-tipped object, lift the cover and change switch 1 to "ON" to enable a password override. This setting erases your current password set in the BIOS Setup utility.

⚠ CAUTION Never use a pencil to change switch settings. Residue from the pencil can damage the system.

Leave the other switches at their default settings (OFF). Changing the settings can cause the system to malfunction.

6. Replace the memory module cover and screw, plug in the AC adapter, and power on the system.
7. At the startup screen, press the DOWN button to enter the BIOS Setup utility. Select the Security menu and check that switch setting procedure has cleared the password.
8. Power off the system and disconnect AC power. Turn over the tablet PC.
9. Turn over the tablet PC and remove the memory bay cover.
10. Set switch 1 back to "OFF" (see the previous figure).
11. Replace the memory module cover and screw, plug in the AC adapter, and power on the system.
12. At the startup screen, press the DOWN button to enter the BIOS Setup utility. Select the Security menu and set a new password.

4

Using the Operating System and Utilities

- Windows Introduction
- Windows Power Management
- NEC Customize Utility
- Application and Driver CD
- NEC Online Documentation
- Product Recovery CD
- NEC CD-RW CD

Windows Introduction

Your system comes preloaded with the Microsoft® Windows® XP Tablet PC Edition operating system. The operating system provides a means of running applications, navigating through your file structure, and using your tablet PC.

Windows XP Tablet PC Edition incorporates the latest ACPI power management. To fully utilize battery power in your NEC Versa LitePad tablet PC, see the following section, "Windows Power Management."

To learn about your tablet PC and how to use it, see the Microsoft Windows XP Tablet PC Edition Tutorials. You can also go to the Windows Start menu and select "Get Going with Tablet PC" for additional tutorials about using the tablet PC and pen.

Windows Power Management

Your NEC Versa LitePad tablet PC manages its power resources using the Advanced Configuration and Power Interface (ACPI) while the system is powered on using AC or battery (DC) power. ACPI enables the operating system to manage the power given to each attached device and to turn off a device when not in use.

Take advantage of the opportunity to manage power on your system to:

- Minimize battery drain.
- Save time. When you return from that urgent call or meeting, you don't have to reboot, just press the power button to resume system operation.

Windows Power Options Properties

ACPI power management settings are controlled through Windows Power Options Properties.

To access Power Options, go to Start, select Control Panel, Performance and Maintenance, and select Power Options.

Power Options Properties includes the following power management areas:

- Power Schemes
- Alarms
- Power Meter
- Advanced
- Hibernate.

Power Schemes

Use the Power Schemes options to define the appropriate Power scheme for your system, and to set timeouts for standby, LCD panel, and hard disk. Define parameters for your system when running under AC (plugged in) or DC (running on batteries) power.

Power Schemes

Parameter	Default Setting	Alternate Setting(s)
Power Schemes	Portable/Laptop	Home/Office Desk, Presentation, Always On, Minimal Power Management, Max. Battery
Turn off monitor (Plugged in)	After 15 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off monitor (Running on batteries)	After 2 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Plugged in)	After 30 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Running on batteries)	After 5 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never

Power Schemes

Parameter	Default Setting	Alternate Setting(s)
System standby (Plugged in)	After 20 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System standby (Running on batteries)	After 15 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System hibernates (Plugged in)	After 3 hours	10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5, 6 hours; Never
System hibernates (Running on batteries)	After 2 hours	10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5, 6 hours; Never

- Power Schemes — Defines the most appropriate power scheme for your computer.
- Turn off monitor — Selects the time delay before your LCD panel turns off.
- Turn off hard disks — Selects the time delay before your hard disk(s) power down.
- System standby — Selects the system standby timeout period for your system when running under AC or DC power.
- System hibernates — Selects the system hibernate timeout period for your system when running on AC or DC power.

Alarms

Use the Alarms screen to define the point at which the battery alarm activates. Define the alarm to either sound an alarm, display a warning message, or invoke Standby, Hibernate, or Shutdown, or run a program.

Alarms

Parameter	Default Setting	Alternate Setting(s)
Low battery alarm	10%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action*	None	Standby, Power Off, Hibernate
Run a program	None	When the alarm occurs, run this program.
Critical battery alarm	3%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action*	Hibernate	Power Off, Standby, Hibernate
Run a program	None	When the alarm occurs, run this program.

*Enabling an Alarm action enables “Force stand by or shutdown even if program stops responding” setting.

- Low battery alarm — Allows you to define a low battery alarm percentage, notification, and system action.
- Critical battery alarm — Allows you to define a critical battery alarm percentage, notification, and system action.

Power Meter

The Power Meter screen displays the remaining battery power and charging status for the battery. Choose to display your battery status information.

Advanced

The Advanced window allows you to select behaviors for the taskbar icon, standby password, and the Power button.

Advanced

Parameter	Default Setting	Alternate Setting(s)
Always show icon on taskbar	Unchecked	Checked
Prompt for password when computer goes off standby	Checked	Unchecked
When I press the Power button on my computer	Shut down	Do nothing Ask me what to do Standby Hibernate Shut down
When I press the Sleep button on my computer*	Standby	Do nothing Ask me what to do Standby Hibernate Shut down

*If USB keyboard has the Sleep button feature.

- Always show icon on the taskbar — Determines whether or not the Power Meter icon displays on the taskbar.
- Prompt for password when computer goes off standby — Determines whether or not the system prompts for your Windows password when resuming from Standby.
- When I press the Power button on my computer — Defines the system action when the Power button is used.
- When I press the Sleep button on keyboard — Defines the system action when the Sleep button is used. This option applies if you have a USB keyboard with a Sleep button.

Hibernate

Use the Hibernate window to enable hibernate support, see the amount of free disk space, and the amount of disk space required to hibernate. When your system hibernates, it performs a save-to-disk. Your current working environment is saved to the hard disk. Use the power button to resume from hibernation. Your system returns to its previous state.

Note Hibernate is enabled by default in Windows.

Windows Power Management States

It's important to recognize your system's behavior when in each of these power management states. The following table describes the system behavior for each power management state.

Windows Power Management Behavior

Feature	LCD Timeout	Standby (STR)	Hibernate (STF)
Default Setting	5 Minutes, DC power	5 minutes, DC power	2 hours, DC power
	15 minutes, AC power	20 minutes, AC power	3 hours, AC power
Manually Invoke		Go to Start, Shutdown, Standby. Press Power button.*	Press Power button.*
System Behavior	LCD panel is blank.	LCD panel is blank.	LCD panel is blank.
	Status LED lights green.	Status LED blinks green.	Status LED turns off.
			Progress bar indicates that current working environment is saved to hard disk.
Resume	Press any key.	Press Power button.	Press Power button.
			Progress bar appears during process.

*Only when set in Advanced Windows Power Management Properties.

NEC Customize Utility

The NEC Customize utility gives you the option to launch the NEC Versa LitePad Tablet PC Application and Driver CD. Use this option to install a variety of software applications, drivers, and utilities. This utility also provides the option for installing the NEC wallpaper.

NEC Customize Utility Screen

The NEC Customize utility screen displays the following options:

- Application and Driver CD — launches the NEC Versa LitePad Tablet PC Application and Driver CD (see "Application and Driver CD" in this chapter).
- NEC Wallpaper — launches the NEC wallpaper.
- Help button — provides an overview of the NEC Customize utility.
- Exit button — closes the NEC Customize utility.

Using the NEC Customize Utility

Follow these steps to use the NEC Customize utility.

1. Double click the NEC Customize icon.
2. From the display window, select the desired option.
3. Follow the on-screen instructions to process the selected option.
4. If necessary, click Exit to close the NEC Customize dialog box.

Application and Driver CD

A variety of software applications, drivers, and utilities are provided on the Application and Driver (A&D) CD that ships with your NEC Versa LitePad tablet PC. Some of the drivers are already installed as part of your operating system environment.

The additional software on the A&D CD lets you take full advantage of your system resources.

Use the Application and Driver CD to install the software of your choice. Some software applications install their own desktop icon allowing quick access to the application. You can also access some applications through the Start, Programs menu.

Launching the A&D CD

Follow these procedures to launch the Application and Driver CD using the NEC Customize utility.

Note The NEC Customize utility requires the connection of a CD-ROM drive.

1. Insert the Application and Driver CD into the CD-ROM drive.
2. Double click the NEC Customize icon.
3. Select Application and Driver CD. The Application and Driver CD dialog box appears

Note If the NEC Customize icon is not available, double click My Computer on the desktop (or in the Start menu) and then click the CD icon. The Application and Driver CD dialog box appears.

The Application and Driver CD dialog box provides selection tabs. Each tab represents a software category. The selection tabs include applications, drivers, utilities, and Help.

Select the tabs to display options on each tab.

Installing the A&D CD Software

Once the Application and Driver CD dialog box appears, follow these steps to install the desired software.

1. Select the application, driver, utilities, or Help that you wish to install or view.
2. Follow the on-screen instructions to install, browse, or return to the main menu.

NEC Online Documentation

An online version of your printed *NEC Versa LitePad Tablet PC User's Guide* is available on the NEC Solutions America Web site.

The online *NEC Versa LitePad Tablet PC User's Guide* is in portable document format (PDF) and requires the installation of the Adobe® Acrobat® Reader. You can install the Acrobat Reader from the Application and Driver CD (see "Application and Driver CD" earlier in this chapter).

To download the most current online version of the *NEC Versa LitePad Tablet PC User's Guide* from the NEC Solutions America Web site, go to **www.necsolutions-am.com/mobilesolutions**.

Product Recovery CD

The Product Recovery CD contains the NEC Product Recovery utility that allows you to restore your system to its initial installation state.

If you determine that you need to restore your system to its initial installation state, use the instructions that follow.

Note Only use the Product Recovery utility to restore your system to its initial installation state as a last resort. Check the problem checklist in Chapter 8 for information about solving problems before using the CD. The Product Recovery utility provides options that either remove or replace existing files, a process that may result in data loss.

⚠ **CAUTION** Before using the Product Recovery CD, enter the BIOS Setup utility, record any customized settings, and restore the BIOS default settings. Save the default settings before exiting the BIOS Setup utility.

Guidelines for Using the Product Recovery CD

Follow these guidelines when using the Product Recovery CD.

- Use AC power.
- Connect a USB keyboard or mouse.
- Remove all optional hardware such as CF Cards, USB devices, and monitors.
- Carefully review the Product Recovery CD options in the next section before proceeding.

⚠ CAUTION Choose your restore option carefully to prevent losing data and applications installed on your system.

Product Recovery CD Options

The Product Recovery CD and utility provides you with Full Disk Drive and Partition Only restore options. Move the cursor over each option on the NEC Product Recovery utility screen to display a description of the option in the window at the right side of the screen.

- Full Disk Drive — Completely rebuilds your hard disk drive, destroying all existing data in the process. Select this option if you wish to restore your hard disk drive to its initial installation state.

Note Use the Full Disk Drive restore option if your hard disk consists of one partition (drive).

- Partition Only — Lets you preserve your existing hard disk drive partition structure and allows you to format only the primary partition without affecting the extended partition(s). Partition Only formats drive C: (of a multiple partitioned drive) and restores drive C: to its initial installation state. *To use the Partition Only option, drive C: must be equal to or greater than 1 GB.* Additional partitions, for example, drives D:, E:, etc., remain intact.

Note Use the Partition Only restore option if your hard disk is partitioned into two or more partitions (drives).

- Exit — Exits the NEC Product Recovery utility.

Full Disk Drive Restore

If your preinstalled software becomes unusable and you cannot boot from the hard disk, use the Product Recovery utility to restore your system to its initial shipping configuration. The Full Disk Drive restore option *erases* the hard disk *completely* before reinstalling the files.

⚠ CAUTION The Full Disk Drive restore option deletes *all* files on the hard drive and replaces them with the original factory installed files.

Only use the Full Disk Drive restore option if the preinstalled software is unusable.

Use the Product Recovery utility to perform a Full Disk Drive restore as follows.

1. Check the Product Recovery CD title and make sure that it is the correct CD for your NEC Versa LitePad tablet PC and operating system.
2. Put CD1 into the CD-ROM drive tray, close the drive door, and reboot your system.
3. Read the License Agreement screen that appears. Use the keyboard or mouse to accept or decline the agreement.

   If you decline the agreement, the recovery utility exits.
4. In the NEC Product Recovery utility screen, choose Full Disk Drive to restore your hard disk drive to its original factory installed state.

⚠ CAUTION Choose your restore option carefully to prevent losing data and applications installed on your system.

5. Read the Warning screen.

   A warning displays indicating that your hard disk is about to be erased.

6. Select Continue to proceed to perform a Full Disk Drive restore.

   If you select Back, the recovery utility returns to the prior screen, which has an exit option. If you select Continue, an NEC screen loads.

7. At the NEC screen, click Continue to start the recovery process.

   A screen with progress bars is displayed and indicates the progress of the recovery.

⚠ CAUTION Do not turn off or disturb the system during the recovery process.

   At the prompt for the next CD, remove CD1 insert CD2 into the CD-ROM drive. Select **OK** to start loading CD2.

   When the recovery process is complete, you are prompted to remove the CD from the CD-ROM drive and reboot your system.

8. At the prompt, remove the CD from the drive. Press **Enter**, click Reboot, or press **Alt-R** to reboot your system.

   A series of hardware detection screens display, the system reboots, and the Windows Setup screen appears. Follow the on-screen instructions to set up Windows.

Partition Only Restore

If your preinstalled software on drive C: of your multiple-partitioned drive becomes unusable and you cannot boot from the hard disk, use the Product Recovery utility to restore your primary partition to its initial shipping configuration.

⚠ CAUTION Use the Partition Only restore option only if your hard disk drive consists of multiple partitions *and* if drive C: contains the operating system and related drivers. Move all other data and applications to other partitions (drives) or the Partition Only restore process will erase them completely.

The Partition Only restore option deletes *all* files on drive C: and replaces them with the original factory installed files. Only use the Partition Only restore option if the preinstalled software on drive C: is unusable.

Use the Product Recovery utility to perform a Partition Only restore as follows:

1. Check the Product Recovery CD title and make sure that it is the correct CD for your NEC Versa LitePad tablet PC and operating system.
2. Put CD1 into the CD-ROM drive tray, close the drive door, and reboot your computer.
3. Read the License Agreement screen that appears. Use the keyboard or mouse to accept or decline the agreement. If you decline the agreement, the recovery utility exits.
4. In the NEC Product Recovery utility screen, select Partition Only to restore drive C: of a multiple partitioned drive to its original factory installed state.

⚠ CAUTION Choose your restore option carefully to prevent losing data and applications installed on your system.

If the hard disk is configured with multiple or extended partitions you may have to reinstall some software to restore configuration settings and shared files.

5. Read the Warning screen.

   A warning displays indicating that drive C: (the primary drive/partition) is about to be erased and formatted. It may be necessary to reinstall software to the other drives (partitions) to reestablish Start Menu links and other configuration requirements stored on drive C:.

6. Select Continue to proceed to perform a Partition Only restore.

   If you select Back, the recovery utility returns to the prior screen, which has an exit option. If you select Continue, an NEC screen loads.

7. At the NEC screen, click Continue to start the recovery process.

   A screen with progress bars is displayed and indicates the progress of the recovery.

⚠ CAUTION Do not turn off or disturb the system during the recovery process.

   Remove CD1 at the prompt for the next CD and insert CD2 into the CD-ROM drive. Select **OK** to start loading CD2.

   When the recovery process is complete, you are prompted to remove the CD from the CD-ROM drive and reboot your system.

8. At the prompt, remove the CD from the drive. Press **Enter**, click Reboot, or press **Alt-R** to reboot your system.

   A series of hardware detection screens display, the system reboots, and the Windows Setup screen appears. Follow the on-screen instructions to set up Windows.

NEC CD-RW CD

If your NEC Versa system comes with an optional CD-R/RW drive, you have the NEC CD-RW CD. The CD-R/RW drive lets you load and start programs from a CD and write information to a CD. The NEC CD-RW CD provides a driver, CDINIT, and an application, Easy CD Creator.

The materials that come with the CD describe how to install and use your software. On-screen prompts provide guidelines during the installation. Once the software is installed, access the on-screen help for more information about using and configuring your CD-R/RW drive.

5

Adding Expansion Devices

- USB Devices
- Memory Module
- CF Cards
- Monitor
- Audio Options

This chapter provides information for adding a variety of industry-standard expansion devices to your NEC Versa LitePad tablet PC. Included in this chapter are procedures for adding:

- USB devices (diskette drive, CD-ROM drive, CD-R/RW drive)
- a memory module
- CF Cards
- a monitor
- audio options (microphone, headphones, stereo speakers).

USB Devices

The NEC Versa LitePad tablet PC comes with three USB ports which increase your connectivity choices. Each USB port allows you to connect up to 127 USB equipped peripheral devices to your tablet PC. These peripherals can include a diskette drive, CD-ROM drive, CD-R/RW drive, digital camera, scanner, printer, modem, mouse, keyboard, telephone, or game device.

You can add multiple USB devices to the tablet PC in several ways:

- add three devices, one to each USB port
- add multiple devices to each USB port by daisy-chaining each device to the next device (each device must have a USB port)
- add multiple devices to each port through an optional multiple USB port hub.

To connect an external USB device to your tablet PC, plug the USB device into one of the USB ports. See Chapter 1 to locate USB ports on your system.

Some USB devices might require power connections and/or driver installation. If you have an NEC USB diskette drive, CD-ROM drive, or CD-R/RW drive, see the following sections in this chapter for installation information. For other USB devices, see the documentation that comes with the device.

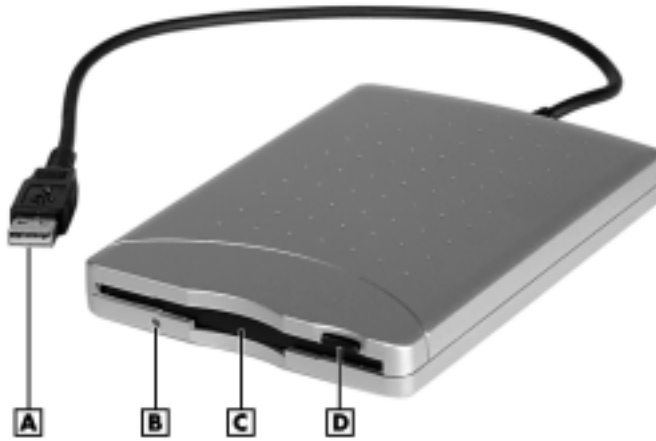
USB Diskette Drive

Use the NEC USB diskette drive option to load and start programs from a standard 1.44 MB, 3 1/2- inch diskette. A USB cable comes attached to the drive. The drive takes power from your tablet PC through the USB cable. There's no need to power the drive separately from an electrical outlet.

The USB diskette drive has the following features (see the following figure).

- Status LED — Lights during data read/write operations. When the indicator is lit, do not eject the diskette, unplug the USB cable, or turn off the NEC Versa LitePad tablet PC. Doing so can cause loss of data from your diskette.
- Eject button — Ejects the diskette.
- USB cable — Connects to a USB port on your NEC Versa LitePad tablet PC.
- Ease of use — Allows connection or removal from your tablet PC any time, with tablet PC power on or off (see the next section).

USB diskette drive features



A – USB Cable
B – Status LED
C – USB Diskette Drive
D – Diskette Eject Button

To connect and use the USB diskette drive, follow these steps.

1. Connect the USB cable attached to the drive to the USB port on your NEC Versa LitePad tablet PC. Tablet PC power can be on or off when connecting the cable.
2. Turn on tablet PC power, if it is not already on.

   If this is the first time the USB diskette drive is connected, a New Hardware Found message displays on your screen and a hardware driver automatically installs for your drive.
3. Insert a diskette in the drive, until it locks in place.

   To eject the diskette, press the eject button. Before ejecting the diskette, be sure that the status LED is not lit.

⚠ CAUTION When you remove the USB diskette drive from the system with Windows XP running, use the Safely Remove Hardware function on the Windows XP taskbar.

USB CD-ROM and CD-R/RW Drives

A USB CD-ROM drive comes with your NEC Versa LitePad tablet PC. The USB CD-R/RW drive is an optional device.

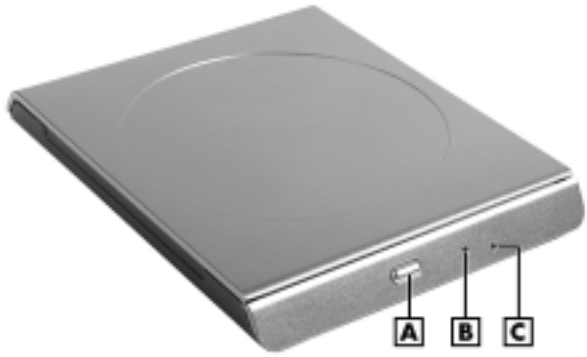
Use the USB CD-ROM and CD-R/RW drives to load and start programs from a compact disc (CD) or to play your audio CDs. These drives are fully compatible with Kodak™ multisession Photo CD™ discs and standard audio CDs.

The Easy CD Creator™ application comes with the CD-R/RW drive. Easy CD Creator allows you to write information to a CD and to back up information from your hard disk drive to a CD. For detailed information about using the USB CD-R/RW drive and installing the Easy CD Creator software, refer to the accessory sheet that ships with the drive.

The USB CD-ROM and CD-R/RW drives are automatically assigned available drive letters.

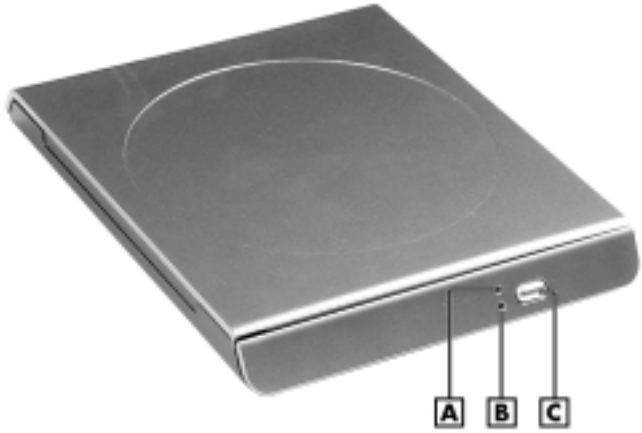
Drive features are shown in the following figures (see the descriptions following the figure).

USB CD-ROM drive — front features



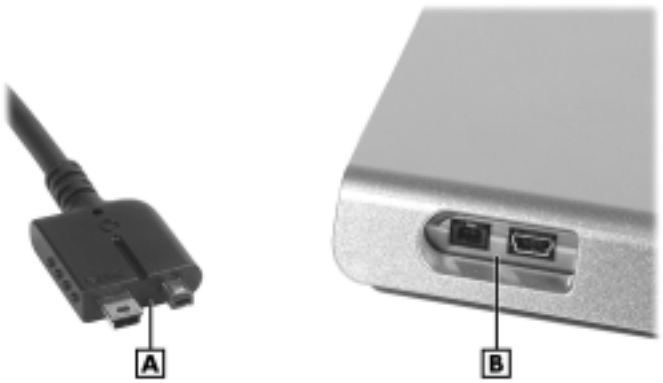
A – Eject Button
B – Status LED
C – Emergency Eject Hole

USB CD-R/RW drive — front features



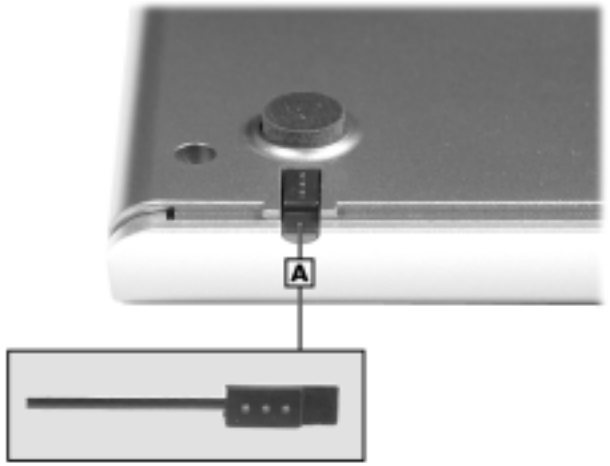
A – Status LED
B – Emergency Eject Hole
C –Eject Button

USB CD-ROM/CD-R/RW drive — rear features



A – USB IF/Power Cable
B – USB Drive Connectors

USB CD-ROM/CD-R/RW drive — bottom feature



A – Emergency Eject Tool

- Eject Button — Opens the drive tray. Press this button to open the tray and load or remove a CD from the drive.
- Drive Status LED — Lights during data read, and for the CD-R/RW drive, write data operations. When the LED is lit, do not open the drive tray, unplug the USB cable, or turn off the NEC Versa LitePad tablet PC. Doing so might cause the loss of data from the CD.
- USB Cable Connectors — Connect the USB cable end with the smaller interface connector to the USB drive; connect the other end to the USB/power ports on the NEC Versa LitePad tablet PC.
- Emergency Eject Hole — Allows you to manually open the drive tray and remove a disc from the drive if the Eject button function is disabled by software or a power failure.

  To open the tray and remove a disc in an emergency, use the emergency eject tool at the rear of the drive. Press the tool into the hole to release the tray.
- Ease of use — The USB CD-ROM and CD-R/RW drives can be disconnected or connected to your tablet PC at any time, with tablet PC power on or off (see the next section).

Using the USB CD-ROM or CD-R/RW Drive

To use the USB CD-ROM or CD-R/RW drive, follow these steps.

1. Connect the USB cable.
   - Plug the USB cable with the smallest USB connector into the back of the drive.
   - Plug the other end of the USB cable into the USB and power ports on your tablet PC.
2. Power on your tablet PC, if it is not already on.

   If this is the first time the USB drive is connected, a New Hardware Found message displays on your screen and a hardware driver automatically installs for your drive.
3. Press the eject button on the drive to open the drive tray. Put your CD on the tray, print side up.

4. Close the drive tray. The CD autoplays if it has an auto start file. If it does not auto start, launch the CD from My Computer.

Note If you have a CD-R/RW drive, see the documentation that comes with the drive to install the Easy CD Creator software.

⚠ CAUTION When you remove the USB CD-ROM or CD-R/RW drive from the system with Windows XP running, use the Safely Remove Hardware function on the Windows XP taskbar.

Handling CDs

When handling CDs, keep the following in mind.

- Always pick up the disc by its edges.
- Avoid scratching or soiling either side of the disc.
- Do not write on or apply labels to the data side of the disc.
- Keep the disc away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the disc by wiping it with a soft cloth. Gently brush the cloth from the center of the disc toward the edge.

⚠ CAUTION Avoid using benzene, paint thinner, record cleaner, static repellent, or any other chemical on the disc. Chemicals and cleaners can damage the disc.

Memory Module

System memory is upgradeable from 256 MB to 512 MB. The NEC Versa LitePad tablet PC has one 64-bit memory slot for a 144-pin SO-DIMM (Small Outline Dual Inline Memory Module). The memory slot is located on the back of your tablet PC.

See the following procedure to upgrade system memory.

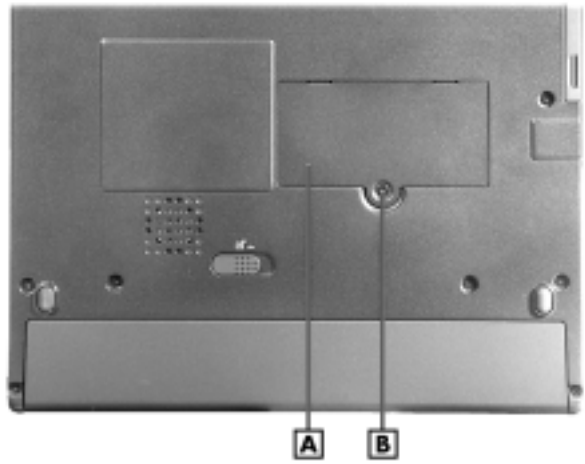
⚠ CAUTION Before handling any internal components, discharge static electricity from yourself by touching a nearby unpainted metal surface.

1. Power off the system, disconnect AC power, remove the battery pack (see Chapter 2), and disconnect any peripheral devices.
2. Locate the screw securing the memory bay cover to the bottom of the tablet PC.

   Remove the screw and lift off the memory bay cover.

Note Removing the memory bay cover screw requires a very small tip Phillips screwdriver.

Memory bay cover



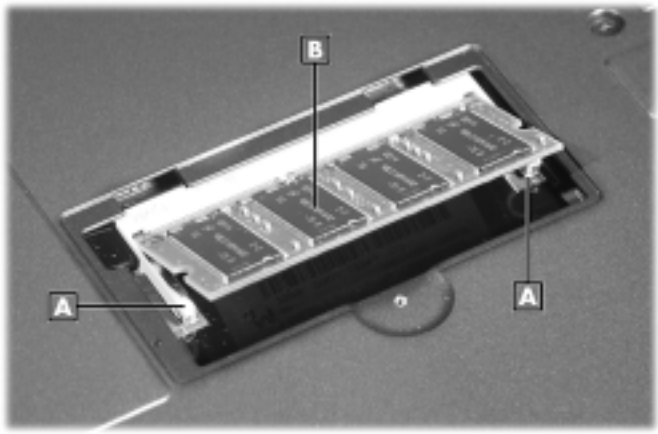
A – Memory Bay Cover **B** – Screw

3. Remove the installed memory module as follows.

⚠ CAUTION Before handling any internal components, discharge static electricity from yourself by touching a nearby unpainted metal surface.

- Press the locking tabs away from the sides of the module until the module pops up at an angle.
- Pull the memory module out of the slot along the angle and store it in a static-free bag.

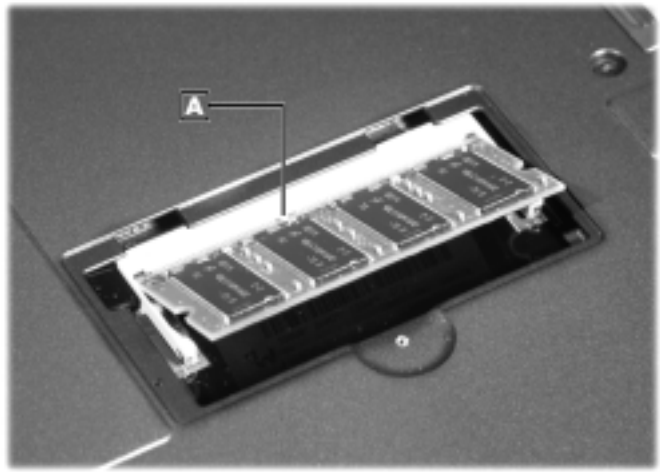
Removing the memory module



A – Locking Tabs **B** – Memory Module

4. Install the new memory module as follows.
   - Locate the alignment notch on the module.
   - Align the notch with the key in the slot connector.
   - Holding the memory module at a 40-degree angle to the socket, insert the module connector into the socket. Firmly push the module into the socket.
   - Press down on the edge of the memory module until the locking tabs on the sides of the socket snap into place, securing the module.

Installing the memory module



A – Module Alignment Notch

5. Replace the memory bay cover and its screw.
6. Turn the system over. Reinstall the battery pack and reconnect the peripherals and the AC adapter power cable.

CF Cards

The NEC Versa LitePad tablet PC supports one Type I or one high-capacity Type II CompactFlash (CF) Card for extending system storage capabilities. The CF Cards have a standard 50-pin connector. Type I cards are 3.3 mm thick and Type II cards are 5 mm thick.

The system integrates one CF Card slot on the right side of the tablet PC. Use the slot to insert one Type I or one Type II CF Card.

Inserting a CF Card

To insert a CF Card, follow these steps.

1. Remove the CF Card slot cover by pressing twice on the eject button next to the slot. Pull the cover out of the slot and save it.

CF card slot cover

A – CF Card Eject Button **B** – CF Card Slot Cover

2. Align the CF Card so that the connector end points toward the CF Card slot and the printed label side is up.
3. Insert the CF Card into the slot.
4. Follow the CF Card manufacturer's instructions for using the card.

Removing a CF Card

To remove a CF Card, follow these steps.

1. Remove the CF Card from it slot by pressing the eject button next to the slot. Pull the card out. Store the CF Card in a static-free container.
2. If you are not installing another CF Card, insert the previously removed slot cover into the slot to keep dust and dirt out.

Monitor

You can add a standard external monitor to your NEC Versa LitePad tablet PC. You need a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the tablet PC.

Follow these steps to connect an external monitor to your tablet PC.

1. Check that the tablet PC is powered off and the monitor power switch is turned off.

Note The NEC Versa LitePad tablet PC must be powered off or suspended while the monitor is being connected.

2. Pull open the monitor port cover and attach the 15-pin cable connector to the VGA monitor port on the system (see "On the Back of the Tablet PC" in Chapter 1 for the port location).

   Secure the cable connection with the cable connector screws.
3. Connect the monitor power cable and plug it into a properly grounded wall outlet.
4. Follow any setup instructions in the monitor user's guide.
5. Turn on power to the tablet PC and device.

Note The NEC Versa LitePad tablet PC supports simultaneous LCD/CRT display. It does not support the display of the CRT only.

Audio Options

The NEC Versa LitePad tablet PC comes equipped with built-in audio ports that let you record and play sound. The audio ports are located on the right side of the tablet PC (see “On the Right Side of the Tablet PC” in Chapter 1 for port locations).

You can connect the following audio options:

- an external microphone to the microphone in jack
- stereo headphones to the headphone jack.

Note If you are using an external microphone and experience sound distortion or feedback, lower the speaker volume.

For additional speaker setup and operation information, see the documentation that comes with the speaker set.

Adjust the volume through the Windows volume setting.

See your Windows documentation for information about recording and playback.

6

Communicating with Your NEC Versa

- Wireless LAN
- LAN Connection
- Internet Connections

Wireless LAN

The NEC Versa LitePad tablet PC comes with built-in wireless LAN capabilities featuring the Wi-Fi™ (wireless fidelity) IEEE 802.11a&b standard for business users. Wireless LAN eliminates the need for connecting cables between your computer and your local area network, facilitating mobility, minimizing downtime, and improving your productivity.

The Wi-Fi compliant radio technology provides high-speed wireless networking with the performance of a wired 10BaseT LAN connection — up to 11 Mbps (IEEE 802.11b) and 54 Mbps (IEEE 802.11a).

Wi-Fi products are tested by an industry group, WECA (Wireless Ethernet Compatibility Alliance), to meet the international IEEE 802.11a&b standards for wireless radio technology and guaranteed to work with all other Wi-Fi certified products.

⚠ WARNING To comply with FCC and Industry Canada RF Exposure requirements, NEC Solutions America recommends when using the NEC Versa LitePad tablet PC with a built-in wireless LAN module, you maintain a distance of at least 1 inch (2.5 centimeters) between the antenna of this device and all persons.

To use wireless LAN, see the online documentation that comes loaded on the NEC Versa LitePad tablet PC. Select the Wireless Manager icon on the Windows desktop.

To turn on the wireless LAN function, slide the wireless LAN switch to on (see "On the Front of the Tablet PC" in Chapter 1).

Note When using the wireless LAN function, operate the tablet PC with AC power to conserve battery power. Turn off the wireless LAN function when you are operating the tablet PC with battery power to conserve battery power.

Pivot the antenna on the NEC Versa LitePad tablet PC to adjust communication with your LAN.

Adjusting the wireless LAN antenna

See “On the Front to the Tablet PC” in Chapter 1 for information about the wireless LAN status LED.

LAN Connection

The NEC Versa LitePad tablet PC comes with a local area network (LAN) connector that allows the connection of your system to a local area network. This connection supports the 10/100Base-TX LAN standard and both Wake-on-LAN and Network Boot functions.

To take advantage of the interface, connect an RJ-45 cable to the LAN port on the left side of the system (see “On the Left Side of the Tablet PC” in Chapter 1.)

Internet Connections

Your NEC Versa LitePad tablet PC is equipped with the Windows operating system to provide a fully-integrated Internet experience. Use the Internet Connection Wizard to configure your system for e-mail and Internet access. Sign up for a new account or configure your system to use an existing account.

Before using the Internet Connection wizard, to transfer an existing account for e-mail and Internet access, you need an Internet service provider (ISP) account and some or all of the following configuration information:

- TCP/IP settings
- port settings
- a user name/logon and password
- your e-mail address
- the name of a POP3, IMAP, or HTTP server (for incoming mail)
- the name of an SMTP server (for outgoing mail).

To access the Internet Connection Wizard in Windows, click or tap the Windows Start button, select Control Panel, Network and Internet Connections, and then select a task or the Internet Option. Launch the connection wizard and follow the on-screen prompts to configure your system for Internet access.

7

Traveling Tips

- Preparing for Travel
- Packing for Travel
- Using Power Connections
- Getting Through Customs
- Connecting to the Internet

Preparing for Travel

The NEC Versa LitePad tablet PC makes a natural traveling companion. With a little preparation you can use the tablet PC practically anywhere you go, to prepare your business documents, confirm your travel plans, surf the Internet, or simply stay in touch with those back home!

Here is what you should do before you leave home:

Note Speed the trip through airport security by carrying a charged system. Inspectors may want to see the screen display a message. The boot message is usually sufficient.

If your system is fully charged, the inspection only takes a minute or so. Otherwise, be prepared to attach the AC adapter and power cable. And if you don't have these, the inspection might include a disassembly of the system.

- Back up your tablet PC hard disk.
- Insert a fully charged battery to make sure your system is ready to quickly boot up at the airport security check.
- Fully charge all your batteries.
- Tape your business card to your NEC Versa LitePad tablet PC, AC adapter, external accessories, and batteries.
- If you run your system with battery power, maximize battery life by using power-saving features whenever possible.
- Take along any application or data files that you might need on diskettes or CDs.
- Check that you have everything you need before you leave on a trip.

Packing for Travel

The following are what you should take with you when you travel with your NEC Versa LitePad tablet PC.

- Extra fully charged batteries
- Single-outlet surge protector
- Appropriate AC plug adapter for international voltage requirements
- Extra digital pens
- External USB CD-ROM or CD-R/RW drive and cables
- USB mouse and keyboard for full-featured PC capabilities
- Copy of proof of purchase for your computer and other equipment or customs registration form for customs check
- Customer support phone numbers for your software (domestic and international)
- AC extension cord.

Using Power Connections

With the right accessories, you can run your NEC Versa LitePad tablet PC almost anywhere! Your system self-adjusts to various power sources. The United States, Canada, and most of Central and South America use 120-volt alternating current (AC). Most other countries of the world use 240-volt AC. The NEC Versa LitePad tablet PC adapts to voltages ranging from 100 to 240 volts, 50 or 60-Hz.

There are a few countries with areas that use direct current (DC) as their main power source. You need a DC-to-AC converter in particular areas of Argentina, Brazil, India, Madeira, and South Africa.

To use your system overseas, you need an adapter plug. There are several different plugs available worldwide. You can buy these at an electronics supply store.

Getting Through Customs

With so many countries in the world, you can be sure that there are a variety of customs regulations. Plan wisely to get your NEC Versa LitePad tablet PC through customs by carrying the appropriate documentation to assure the customs agent that your system is not a recent purchase.

Travelers are often asked, when returning to their home country, whether or not they purchased the computer while outside of the country. Sometimes, the proof of purchase such as a bill of sale, insurance policy, or purchase receipt is sufficient. Taking along the purchase receipt for your tablet PC may sound practical, but may not always suffice, particularly when the purchaser of the computer is your company and the original receipt is not available to you.

Another alternative to a proof of purchase document is a Certificate of Registration, a document that is issued when you register your NEC Versa LitePad tablet PC with the Customs Service prior to departure. The certificate of registration contains a brief description of your tablet PC and lists appropriate serial numbers for identification. The document is available from the customs web site at http://www.customs.ustreas.gov/.

To avoid hassle when moving your system through customs, you may want to obtain a certificate of registration and carry it whenever you travel out of the country with your NEC Versa LitePad tablet PC.

Connecting to the Internet

Whether you are on a business trip or vacation, connecting to the Internet while you travel can be expensive and frustrating unless you are prepared. Here are some tips on how to avoid frustration and expense while on the road.

Connecting Using a LAN

Many hotels and convention centers now offer direct Internet access for a nominal fee. If your hotel provides this service, follow these guidelines for connecting and configuring your system.

- Many hotels can provide a LAN cable by prearrangement, so you can travel with a minimum of accessories.
- Plug the LAN cable into your system and the LAN connector in the room or hall where you want to access the Internet.
- After connecting the LAN cable, connect your system to an AC power outlet (if desired) and power on your system.
- Try launching your browser (Microsoft Internet Explorer, or Netscape Communicator, for example):

  — If your TCP/IP network settings are already configured to "Use DHCP for WINS Resolution" you should be able to access the Internet.

  — If your TCP/IP network settings are not set to use DHCP, a help screen may appear, or you may be directed to call the LAN provider for assistance configuring your system.

  Follow the instructions that are provided to you completely, so your settings work effectively with the provider's system.
- If you have problems, the hotel or convention center may be able to direct you to a support technician.

Connecting Using Wireless LAN

There are now many public wireless LAN services available for the traveler. Many hotels, some airports, and some cafes now offer wireless LAN access to the Internet for a nominal fee or for free.

To take advantage of wireless LAN services on the road, you need to be in close proximity to an access point. You can find wireless LAN access in some hotel lobbies, meeting rooms, and restaurants and airport clubs and lounges.

Usually you need to know the encryption key to access the service. Many places charge for wireless LAN service by the hour, multiple hours, 24-hour periods, or even by the week or month for the frequent traveler.

Note To use wireless LAN, see the online wireless LAN documentation that comes loaded on the NEC Versa LitePad tablet PC.

8

Solving System Problems

- Problem Checklist
- Startup Problems
- If You Need Assistance

Once in a while you may encounter a problem with your NEC Versa LitePad tablet PC. If the screen is blank, the instructions don't help, or no error message appears, use the information here to determine and fix the problem. You still may be able to solve the problem yourself!

Problem Checklist

First check the items in the following list. If these items don't help, see the table that follows the list.

- Power is on to the tablet PC.
- The electrical outlet to which your AC adapter is connected is working. Test the outlet by plugging in a lamp or other electrical device.
- All cables are tightly connected.
- The display setting is configured correctly.
- The display's brightness is adjusted properly.
- If using battery power, check that the battery pack is properly inserted and fully charged.

Troubleshooting

Problem	What to Do
The system does not power on.	If you are operating the system with battery power, check that the battery pack is correctly inserted. Attach the AC adapter to recharge the battery. If you have the AC adapter attached, check that the electrical outlet you are using works.

Troubleshooting

Problem	What to Do
LCD screen is dark and blank.	Power-saving mode has shut off the backlight. Try to recover by tapping your pen, moving your mouse, or pressing any keyboard key. Screen brightness needs adjustment. Adjust the brightness in Windows. Double click (tap) the pen and tablet icon in the system tray, select Display, adjust the Brightness for AC or battery operation. The system entered Standby mode due to low battery power. Plug in the AC adapter before resuming operation.
Battery power does not last long.	If you are using wireless LAN, run it on AC power. If you are using an optical drive, such as the CD-ROM drive, use it on AC power. Fully charge and fully discharge the battery several times to recondition it. Use the Battery Refresh function in the Standard Menu of the BIOS Setup utility (see “Standard Menu” in Chapter 3). Replace the battery. Use power-saving modes.
Information on the LCD screen is difficult to see.	Adjust the brightness in Windows. Double click (tap) the pen and tablet icon in the system tray, select Display, adjust the Brightness for AC or battery operation.

Problem	What to Do
The Suspend/Resume function does not work.	If the system does not suspend, a disk drive might be busy. Wait until the disk drive stops and try again. If system does not resume, it may have auto suspended on a low battery. Attach the AC adapter and try again. If the system still does not suspend, check that Auto Play is disabled for the CD-ROM drive. Try removing and reinstalling the battery.
System shuts off instead of going into sleep mode.	You held the power/sleep switch for more than four seconds. For sleep mode, slide the switch and immediately release.
System does not shut off after pressing the power/sleep button.	You might not have held the power/sleep switch long enough. Slide the switch and hold for four seconds or more before releasing.
System password set in BIOS Setup forgotten.	Clear the password and reset it. To clear the password, see “Checking/Changing Switch Settings” in Chapter 3.
Speaker volume is low.	Adjust the volume through the Windows speaker icon in the system tray.

Problem	What to Do
Pen doesn't work well.	Watch the cursor on the tablet screen rather than the tip of the pen. If you changed screen orientation, recalibrate your pen. If the tip of the pen is worn and it is a replaceable tip, replace the tip.
An optional component does not work.	Make sure the component is securely installed or connected. Verify that the system parameter for the I/O port configuration is set correctly in Setup.

If You Need Assistance

If you have a problem with your computer, first review the checklist and troubleshooting table in the previous section.

If you still have a problem, see Chapter 9, "Getting Service and Support," for details about contacting NEC Solutions America.

Note If you are using this product outside the U.S. or Canada, please contact the local NEC office or their dealers for the support and service available in your country.

9

Getting Service and Support

- Contact Information
- Web Site
- Support Services
- E-mail to Support Services

Contact Information

See the following table for a quick reference to support services available from NEC Solutions America.

Support Services from NEC Solutions America

Service	Contact Information
NEC Solutions America Web Site	www.necsolutions-am/ mobilesolutions.com
Support Services Web Site	support.neccomp.com
Phone to Support Services (U.S. and Canada customers only).	1-800-632-4525
E-mail to Support Services (through a commercial online service or the Internet)	op.system.support@necsam.com

If you have access to a telephone, a modem, an access point, and/or a LAN Internet connection, you can use these services to obtain information about your system at any time, day or night, seven days a week.

Not only do these services provide information about your NEC system, they can also be used to answer your questions and help solve any problems you may have with your system, should that ever be necessary.

Web Site

If you have a modem or are connected to a network, you can access the NEC Solutions America Web site. You can do this through a commercial online service or through your Internet account. The Web site contains general information about NEC Solutions America and its products, press releases, reviews, a reseller locator, and service and support information.

Look in the Service and Support area for the following:

- technical documentation, including Frequently Asked Questions, reference manuals, and warranty information
- BIOS updates, drivers, and Setup Disk files to download
- contact information, including telephone numbers for Technical Support and links to vendor Web sites
- an automated e-mail form for your technical support questions
- a password-accessible area for resellers.

To access the Mobile Solutions Division of NEC Solutions America Home Page, enter the following Internet Uniform Resource Locator (URL) in your browser:

http://www.necsolutions-am.com/mobilesolutions

To access the NEC Solutions America Support Page, enter the following Internet Uniform Resource Locator (URL) in your browser:

http://support.neccomp.com/

Support Services

NEC Solutions America also offers direct technical support through Support Services. NEC Solutions America Support Services is for U.S. and Canadian customers only.

Direct assistance is available 24 hours a day, 7 days a week. Call NEC Solutions America Support Services, toll free, at **1-800-632-4525** (U.S. and Canada only) for system hardware support and to find out about the extended service programs available for purchase.

Please have your system accessible while calling for technical support to ensure that NEC Solutions America support personnel can successfully troubleshoot your system.

For outside the U.S. or Canada, please contact your local NEC office or dealer for the support and service available in your country.

E-mail to Support Services

NEC Solutions America Support Services offers technical support by e-mail if you have Internet access. The e-mail address is:

op.system.support@necsam.com

When using the e-mail support service, you should include the word "Tablet PC" in the subject field for prompt response from the appropriate technical person.

You should provide as much specific information about your questions as possible. You will receive a response to your questions, usually within one business day.

A

Setting Up a Healthy Work Environment

- Making Your Computer Work for You
- Arrange Your Equipment
- Adjust Your Chair
- Adjust Your Input Devices
- Adjust Your Screen or Monitor
- Vary Your Workday
- Pre-existing Conditions and Psychosocial Factors

Making Your Computer Work for You

Computers are everywhere. More and more people sit at computers for longer periods of time. This appendix explains how to set up your computer to fit your physical needs. This information is based on ergonomics — the science of making the workplace fit the needs of the worker.

Some nerve, tendon, and muscle disorders (*musculoskeletal disorders*) may be associated with repetitive activities, improper work environments, and incorrect work habits. Examples of musculoskeletal disorders that may be associated with certain forms of repetitive activities include: carpal tunnel syndrome, tendinitis, tenosynovitis, de Quervain's tenosynovitis, and trigger finger, as well as other nerve, tendon, and muscle disorders.

Note Prolonged or improper use of a computer workstation may pose a risk of serious injury. To reduce your risk of injury, set up and use your computer in the manner described in this appendix.

Although some studies have shown an association between increasing hours of keyboard use and the development of some musculoskeletal disorders, it is still unclear whether working at a computer causes such disorders. Some doctors believe that using the keyboard and mouse may aggravate existing musculoskeletal disorders.

Note Contact a doctor if you experience pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

Some people are more susceptible to developing these disorders due to pre-existing conditions or psychosocial factors (see "Pre-existing Conditions and Psychosocial Factors" later in the appendix).

To reduce your risk of developing these disorders, follow the instructions in this appendix. If you experience discomfort while working at your computer or afterwards, even at night, contact a doctor as soon as possible. Signs of discomfort might include pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

Note To increase your comfort and safety when using your tablet PC as your primary computer system at your home or office, note the following recommendations:

Use a separate, external keyboard attached to your tablet PC.

Use a separate, external monitor attached to your tablet PC.

Arrange Your Equipment

Arrange your equipment so that you can work in a natural and relaxed position. Place items that you use frequently within easy reach. Adjust your workstation setup to the proper height (as described in this appendix) by lowering the table or stand that holds your computer equipment or raising the seat height of your chair. Position your tablet PC directly in front of you for increased safety and comfort.

Adjust Your Chair

Your chair should be adjustable and stable. Vary your posture throughout the day.

Check the following:

- Keep your body in a relaxed yet upright position. The backrest of your chair should support the inward curve of your back.
- Use the entire seat and backrest to support your body. Tilt the backrest slightly backwards. The angle formed by your thighs and back should be 90° or more.
- Your seat depth should allow your lower back to comfortably contact the backrest. Make sure that the backs of your lower legs do not press against the front of the chair.

- Extend your lower legs slightly so that the angle between your thighs and lower legs is 90° or more.
- Place your feet flat on the floor. Only use a footrest when attempts to adjust your chair and workstation fail to keep your feet flat.
- Be sure that you have adequate clearance between the top of your thighs and the underside of your workstation.
- Use armrests or forearm supports to support your forearms. If adjustable, the armrests or forearm supports should initially be lowered while all the other adjustments discussed in this appendix are made. Once all these adjustments are completed, raise the armrests or adjust the forearm supports until they touch the forearms and allow the shoulder muscles to relax.

Adjust Your Input Devices

Note the following points when positioning your tablet PC or any external input devices.

- Position your keyboard directly in front of you. Avoid reaching when using your keyboard or mouse.
- If you use a mouse, position it at the same height as the keyboard and next to the keyboard. Keep your wrists straight and use your entire arm when moving a mouse. Do not grasp the mouse tightly. Grasp the mouse lightly and loosely.
- Adjust the keyboard height so that your elbows are near your body and your forearms are parallel to the floor, with your forearms resting on either armrests or forearm supports, in the manner described previously. If you do not have armrests or forearm supports, your upper arms should hang comfortably at your sides.
- Adjust the keyboard slope so that your wrists are straight while you are typing.
- Type with your hands and wrists floating above the keyboard. Use a wrist pad only to rest your wrists between typing. Avoid resting your wrists on sharp edges.
- Type with your wrists straight. Instead of twisting your wrists sideways to press hard-to-reach keys, move your whole arm. Keep from bending your wrists, hands, or fingers sideways.

- Press the keys gently; do not bang them. Keep your shoulders, arms, hands, and fingers relaxed.

Adjust Your Screen or Monitor

Correct placement and adjustment of the screen or external monitor can reduce eye, shoulder, and neck fatigue. Check the following when you position the screen or external monitor.

- Adjust the height of your screen or external monitor so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen or external monitor.
- Position your screen or external monitor no closer than 12 inches and no further away than 28 inches from your eyes. The optimal distance is between 14 and 18 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the screen or external monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen or external monitor.
- If reflected light makes it hard for you to see your screen or external monitor, use an anti-glare filter.
- Clean your screen or external monitor regularly. Use a lint-free, non-abrasive cloth and a non-alcohol, neutral, non-abrasive cleaning solution or glass cleaner to minimize dust.
- Adjust the screen or external monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen or external monitor.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Get regular eye check-ups.

Vary Your Workday

If you use your computer for prolonged periods, follow these instructions.

- Vary your tasks throughout the day.
- Take frequent short breaks that involve walking, standing, and stretching. During these breaks, stretch muscles and joints that were in one position for an extended period of time. Relax muscles and joints that were active.
- Use a timer or reminder software to remind you to take breaks.
- To enhance blood circulation, alter your sitting posture periodically and keep your hands and wrists warm.

Note For more information on workstation setup, see the American National Standard for Human Factors Engineering of Visual Display Terminal Workstations. ANSI/HFS Standard No. 100-1988. The Human Factors Society, Inc., P.O. Box 1369, Santa Monica, California 90406.

Pre-existing Conditions and Psychosocial Factors

Pre-existing conditions that may cause or make some people more susceptible to musculoskeletal disorders include the following: hereditary factors, vascular disorders, obesity, nutritional deficiencies (e.g., Vitamin B deficiency), endocrine disorders (e.g., diabetes), hormonal imbalances, connective tissue disorders (e.g., arthritis), prior trauma (to the hands, wrists, arms, shoulders, neck, back, or legs), prior musculoskeletal disorders, aging, fluid retention due to pregnancy, poor physical conditioning and dietary habits, and other conditions.

Psychosocial factors associated with these disorders include: workplace stress, poor job satisfaction, lack of support by management, and/or lack of control over one's work.

Contact a doctor if you experience pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

This appendix was prepared in consultation with Dr. David Rempel of the University of California/San Francisco Ergonomics Program and Mr. M.F. Schneider of HUMANTECH, Inc., Ann Arbor, Michigan.

B

Specifications

- Base System
- Expansion
- Power
- Security
- Dimensions and Weight
- Recommended Environment

Base System

Note Components may vary. The specifications provided in this appendix are similar, but not necessarily identical to those in your system.

System Processor

Mobile Intel® Pentium® III Processor ULV-M, featuring Intel SpeedStep™ Technology

- 933 MHz, or higher processor
- 133-MHz Front-Side Bus (FSB)
- L2 cache — 512-KB

Memory

Random Access Memory (RAM)

- Standard Memory — 256 MB of high-speed PC133 memory in one SO-DIMM slot
- Memory Expansion—512 MB of PC133 memory upgrade in SO-DIMM slot

BIOS Read-Only Memory (ROM) — 512-KB flash ROM

Cache Memory — L1 Cache; 16 KB code and 16 KB data

Calendar Clock

Year/month/day/hour/minute/second maintained by internal back-up battery

Core Chip

Napa2-T (North Bridge) and Ali 1535+ (South Bridge)

Video

Controller — embedded in core chip (North Bridge)

Video RAM —16 MB (UMA)

Resolution — XGA (default) and SVGA

VGA out — support for simultaneous LCD/CRT display

LCD

Extended Graphics Array (XGA) LCD panel

- 10.4-inch reflective active-matrix Thin Film Transistor (TFT) color display
- Protective covering — tempered glass with coating
- Resolution — 1024 × 768 max
- Colors — up to 65,536
- Color depth — 24-bit

Digitizer

Tablet — Electromagnet give and receive method (Wacom)

Pens — Wacom slim pen (5-mm) and clip pen (9-mm)

User Controls

Buttons —push button

- Change screen orientation
- Escape
- Function
- Security
- Down
- Enter
- Up

Switches — slide switch

- Power
- Radio wave

Audio

Controller — embedded in core chip (South Bridge)

- Sound Codec — ADI 1981B
- Internal monoaurol speaker
- Internal microphone

- SoundBlaster compatible
- Software beep control
- Buzzer support

Keyboard

Slim, space-saving USB keyboard with standard QWERTY-key layout

- Function keys — 12 keys
- Cursor control keys
- Windows key set
- Num lock, Caps lock, Scroll lock, and Fn status LEDs
- Sleep button
- Embedded numeric keypad

Mouse

Mini 3-button USB optical wheel mouse

Hard Disk Drive

- 1.8-inch, 5mm, IDE, UltraDMA/100
- 20-GB or higher hard disk drive

Note When referring to storage capacity, GB stands for one billion bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Input/Output (I/O) Facilities

Integrated industry-standard interfaces

- LAN Port — 1 port, RJ-45 jack
- DC In — 1 port for AC adapter cable
- USB Ports — 3 ports, one with DC out power port
- VGA — 1 port, 15-pin high-density D-sub
- Microphone In — 1 port, 3-pin, Mini-Pin jack

- Stereo Headphone Out — 1 port, 3-pin, Mini-Pin jack

LAN

- 10Base-T and 100Base-TX
- Wake On LAN support on S3/S4 states
- LAN boot support (network boot)
- Remote Power On support
- Full duplex support
- Software support for management server
- Integrated on main board

Wireless LAN

Mini PCI — 802.11a +b

Outside antenna

Expansion

> ***Note*** Some devices may come standard, depending upon your system configuration.

Storage Devices

- Optional external USB industry-standard 3.5-inch, 1.44-MB diskette drive
- External USB CD-ROM drive
- Optional external USB CD-R/RW drive

> ***Note*** When referring to storage capacity, MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Card Slot

One CF card slot for Type I or Type II CF Card

Power

ACPI power management support; power status and battery charge status LEDs

Batteries

Main Battery

- Lithium ion (Li-Ion), 4 cell battery pack
- Battery Life — over 3 hours

RTC Battery

AC Adapter

- Input Voltage — 100 to 240 volts (V) AC, 50 watt (max.)
- Output Voltage — 19 volts DC, 50 watt (max.)

Security

- Kensington lock slot
- Power-on password; can set with pen

Dimensions and Weights

Tablet PC System

- Width — 8.82 in (224 mm)
- Length — 11.69 in. (297 mm)
- Thickness — 0.59 in. (15 mm)
- Weight — 2.24 lbs. (1015 g)

Recommended Environment

Operation

- Temperature — 41ºF to 95ºF (5ºC to 35ºC)
- Relative Humidity — 20% to 80% (Noncondensing)

Storage

- Temperature — –4ºF to 104ºF (–20ºC to 40ºC)
- Relative Humidity — 20% to 80% (Noncondensing)

C

Frequently Asked Questions

- External Mouse
- Display
- Diskette Drive
- Booting
- Power Management
- Battery Charging
- Miscellaneous

External Mouse

How can a mouse and an external keyboard be connected to the tablet PC at the same time?

The NEC Versa LitePad tablet PC is equipped with three USB ports that allow you to connect any combination of three USB devices, at the same time. Simply plug each device into any of the USB ports on your system.

Display

What is the maximum resolution I can run in simultaneous mode?

The maximum resolution in simultaneous mode is 1024 x 768 for XGA TFT panels, depending on the capabilities of the external monitor.

Can I operate the tablet PC in CRT display mode?

No. The tablet PC is designed to operate in simultaneous LCD and CRT or LCD only display modes.

Diskette Drive

Why can't I boot from the external diskette drive?

To boot from the external diskette drive, be sure that you have a diskette in the drive containing operating system files. Be sure to check the Boot menu parameters in the BIOS Setup Utility to determine the designated sequence of boot devices. See Chapter 3, "Using the BIOS Setup Utility."

See your operating system documentation for information about creating system diskettes.

What happens if I leave a diskette in my diskette drive?

Shutting down your system with a diskette in the drive can damage the data on your diskette and your drive. Remove the diskette before powering off.

How do I format a diskette?

Select My Computer from Start menu and then right click on the diskette drive icon. Select Format and choose the format process that best suits your needs.

What type of diskette do I use in my diskette drive?

The Versa LitePad tablet PC supports the 1.44-MB* diskette drive option which uses 3.5-inch high density (HD) diskettes. These diskettes are also called double-sided, high-density (DSHD) diskettes. You can store 1.44 MB* of information on these diskettes.

This diskette drive can also use 3.5-inch double-sided, double-density (DSDD) diskettes. These diskettes only hold 720 kilobytes of data – about half the amount of data that 1.44-MB* diskettes hold.

Why does the amount of available storage displayed for the diskette drive vary between utilities?

Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Booting

How do I warm boot my computer?

Go to Start, Turn Off Computer, Restart the computer.

How do I cold boot my computer?

Go to Start, Turn Off Computer, Turn Off to shut down the computer or use the system's Power switch to perform a cold boot or. Wait at least five seconds, and then turn the power on.

What is the difference between a warm boot and a cold boot?

A warm boot restarts the system while system power is on. A warm boot is also a software reset. A warm boot clears volatile system memory and reloads the operating system.

A cold boot is a system start with power off. A cold boot also resets the hardware. It checks the hardware and reloads the operating system.

Power Management

Does my system come with power management features enabled?

Yes, your system comes with power management features enabled. Your system manages its power resources using the Advanced Configuration and Power Interface (ACPI). ACPI power management settings are controlled through the Windows Power Options Properties.

See "Windows Power Management" in Chapter 4 for a description of power management settings. Also, see the Windows documentation for detailed information about managing power.

What is the purpose of Standby mode?

You can initiate a Standby mode (full Suspend-to-RAM) by accessing Start, Turn Off Computer, Stand By. This places the system in a deeper state of "sleep" and requires that you press the power button to resume operation.

Putting your system into Standby initiates the Standby power-saving mode and is a convenient way of conserving energy when you are going to be away from your system for a short period of time.

What is the function of Hibernation mode?

Hibernation (Suspend-to-File) provides the greatest power savings by putting the system into a maximum power shutdown.

When the system goes into Hibernation mode, it saves data and system status and then shuts off power to all components.

Hibernation mode lets you save power without first saving your work. Resuming from Hibernation mode requires less time than performing a cold boot.

Your system must be configured for Hibernation. In Windows Power Management Properties, check the box labeled “enable hibernate support,” under the Hibernate tab.

To go into Hibernation mode, go to Start, select Turn Off Computer. Press the Shift key (Stand By changes to Hibernate.) Select Hibernate.

How do I bring my system out of Standby mode?

Sliding the Power switch brings the system out of Standby mode.

What can I do to conserve battery power?

There are several ways to conserve battery power, and this is an important activity, particularly if you frequently use your system in situations when you can’t operate your system on AC power.

Try using your system with a lower screen illumination to conserve battery.

There are also activities that draw larger amounts of battery power. If possible, operate your system on AC power in these circumstances to conserve your battery. For example, NEC Solution Americas recommends running the system on AC power while using external devices such as a printer or a USB drive or when connected to a network.

Battery Charging

Why didn't my fully-charged spare battery have as much power as a newly charged battery?

Batteries self-discharge when they are not being charged (about 1% per day for a Li-Ion battery). To make sure a battery pack is fully charged, recharge it before you need it. Keep the battery installed in the system and keep the AC adapter connected to AC power whenever possible.

Why is my battery operation time getting shorter?

Heat or residual memory might be shortening the battery operation time.

The battery is heat sensitive and can only be charged to its maximum if the battery and its environment is within 59 to 77 degrees Fahrenheit (15 to 25 degrees Centigrade). The more the temperature deviates from this range during recharging, the less chance the battery can fully charge. To recharge the battery to its full capacity, it is recommended to cool down the unit by unplugging the AC adapter. When the unit has cooled, then plug in the AC adapter to start recharging again.

Also, use the Battery Refresh feature in the BIOS Setup utility to fully discharge your battery and eliminate any residual discharge effect. See "Standard Menu" in Chapter 3 for information about this feature.

Once refreshed, your battery is conditioned to recharge to its full capacity with the AC adapter connected to AC power.

Miscellaneous

Is it normal for the back of the tablet PC to get warm while using the system?

Yes, it is normal for the system to get warm. Be sure that you keep the vents at the top of the tablet PC clear for proper ventilation.

How do I set the time and date?

You can change the time and date in Windows by double clicking the time in the lower right corner of the screen. Change the date and time as needed.

How do I speed up my application?

If the application you are using runs really slow, close any other applications you are not using — this should speed things up.

If your application still runs slow, you might consider upgrading the current memory module installed in the tablet PC (see “Memory Module” in Chapter 5).

Also, refer to your operating system’s documentation for tips on optimizing system performance.

Why do I get a message "Insufficient memory" when I run some games?

The "Insufficient memory" refers to the 640 kilobytes of (DOS) base memory. Since there are drivers being loaded at power on, the amount of memory can be lower than the game requires.

Contact the game manufacturer and request advice to create a boot disk. This loads only the drivers necessary to run the game.

How do I find help in a Windows application?

If you need help in a Windows application, click on a Help button or Help menu item. Most applications provide online help. If the application doesn't provide these, try pressing **F1**.

How do I save a file?

You save a file by selecting File, then Save As or Save, from the drop down menu. If the file was not previously named, you are prompted for a file name. In Windows XP, you can use up to 255 characters to name a file.

*When referring to storage capacity, MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Glossary

A

AC adapter

A device that connects an NEC Versa LitePad tablet PC and an AC wall outlet to provide AC power for running the system and recharging the battery.

A/D conversion

The process of converting an analog signal into a digital signal.

animation

The art of making things appear to move in two-dimensional (2D) or three-dimensional (3D) space and making events happen over time.

applications programs

Software designed to perform specific functions, like solving business or mathematical problems.

audio

The range of acoustic, mechanical, or electrical frequencies that humans hear.

B

base RAM

Area of system memory between 0 and 640 kilobytes available to the user for the operating system and application programs.

BIOS

Basic Input Output System. A collection of computer routines, usually burnt into ROM, that controls the real-time clock, keyboard, disk drives, video display, and other peripheral devices.

bit

Binary digit. The smallest unit of computer data.

bits per second
(bps) A unit of transmission. Also called baud rate.

board
Printed circuit board (PCB). Board on which computer components are soldered and thin wires are printed to connect the components.

boot
To start up a computer. See cold boot and warm boot.

bus
An electronic circuit within a computer used for transmitting data or electrical power from one device to another.

byte
Group of eight contiguous bits.

C

CardBus
A 32-bit high-performance bus defined by the PC Card Standard and released by the PCMCIA standards body and trade associations. CardBus offers wider and faster 32-bit bus and bus mastering operation for improved adapter performance and can operate at speeds up to 32-MHz.

CD
Compact disc. A polished metal platter capable of storing digital information. The most prevalent types of compact discs or those used by the music industry to store digital recordings and CDs used to store computer data. Both types are read-only, which means that once the data is recorded onto them, they can only be read or played.

CD audio
Also called digital audio, uses the same format as conventional music CDs. CD audio sounds have been digitized at a high sampling rate.

CD-ROM drive

Compact Disc Read-Only Memory. A computer-controlled device that reads high-capacity optical discs and sends the output to the computer.

CD-RW drive

Compact Disc Read/Write. A computer controlled device that reads from and writes to high capacity optical discs.

clock

Electronic timer used to synchronize computer operations.

CMOS

Complementary Metal Oxide Semiconductor. A chip that contains nonvolatile memory in the Versa LitePad tablet PC. CMOS is backed up by an internal battery that preserves clock/calendar data and system configuration parameters stored in CMOS.

cold boot

Process of starting up the computer by turning on the power. If power is already on, the process means to turn off the computer and turn it on again. A cold boot reinitializes all devices.

CRT

Cathode-Ray Tube. A type of display screen used in desktop monitors. It forms the screen image using tiny dots called, pixels. See also LCD.

cursor

A movable image on the display screen that indicates where the next entered data appears.

D

default

A value, option, or setting that the computer automatically selects until you direct it otherwise.

digital audio
Recorded sounds such as speech and sound effects. These are played back by the audio circuit's Digital-to-Analog Converter (DAC).

digital sound
A description of a sound wave that consists of binary numbers.

digitizing
The process of converting an analog signal into a digital representation.

diskette
A thin flexible platter coated with a magnetic material for storing information.

diskette drive
A magnetic drive that writes on and retrieves data from a diskette.

E

enhanced VGA
A video interface that offers more colors or higher resolution than VGA.

extended RAM
The area of RAM above the first megabyte of memory in the system available for enhancing system performance.

F

FIR
Fast Infrared, an infrared technology that sends data at 4.0 Mbit/second (4 million bits per second).

FM synthesis
A technique for synthesizing sound that uses a combination of modulated sine waves to produce different waveforms.

function key
The set of keys on the keyboard (usually F1 through F12) that let you get help and error message information or quickly select frequently used commands.

H

hard disk
A rigid magnetic storage device that provides fast access to stored data.

hardware
The electrical and mechanical parts from which a computer is made.

hertz
(Hz) A unit of frequency equal to one cycle per second.

hot key
Combination of two or three keys that you press simultaneously for a particular function.

input/output
(I/O) The process of transferring data between the computer and external devices.

IDE
Intelligent Drive Electronics. A hard disk drive type that has controller electronics built into the drive and delivers high throughput.

interface
A connection that enables two devices to communicate.

interrupt
A special control signal from an I/O device that diverts the attention of the microprocessor from the program to a special address.

K

kilobyte
(KB) 1024 bytes.

L

LAN
Local Area Network.

LCD
Liquid Crystal Display. An LCD consists of a thin sandwich of two glass plates with sealed edges, containing nematic liquid-crystal material that forms the screen image. Versa displays are LCD type.

load
To copy a program into the computer's memory from a storage device.

M

megabyte
(MB) 1,048,576 bytes.

memory
Electronic storage area in a computer that retains information and programs. A computer has two types of memory — read-only memory (ROM) and random access memory (RAM).

menu
A video display of programs or options.

microprocessor
A semiconductor central processing unit that is the principal component of a microcomputer. Usually contained on a single chip that includes an arithmetic logic unit, control logic, and control-memory unit.

MIDI
Musical Instrument Digital Interface. A standard serial bus, digital interface designed to connect electronic musical devices. MIDI has no innate sound of its own.

MIR
Medium Infrared, an infrared technology that sends data at 1.152 Mbit/second (1,152,000 bits per second).

mode
A method of operation; for example, the NEC Versa LitePad tablet PC operates in either normal or power-saving modes.

modem
MOdulator-DEModulator. A device that links computers over a telephone line.

MPEG
The MPEG (Moving Pictures Experts Group) standard is used to encode motion images. The MPEG player program in Windows lets you play back MPEG files.

multimedia
Integrated forms of media such as sound, text, graphics, and video.

N

nonvolatile memory
Storage media that retains its data when system power is turned off. Nonvolatile memory in the Versa LitePad tablet PC is a complementary metal oxide semiconductor (CMOS) chip that is backed up by an internal battery. The backup battery preserves the clock/calendar data and system configuration parameters stored in CMOS. See volatile memory.

O

operating system
Set of programs that manage the overall operation of the computer.

overwrite
Storing information at a location where information is already stored, thus destroying the original information.

P

page
A type of message transmission in which a message is sent or received via modem to a paging device from a computer (with paging communications software) or telephone.

parallel interface
Interface that communicates multiple data bits at a time.

parallel printer
A printer with a parallel interface.

parameter
A characteristic of a device or system.

partition
Process of dividing mass storage (hard disk drive) into isolated or separate sections. Partitioning a hard drive creates additional logical drives, e.g., a 5.1-GB hard drive partitioned into three logical drives creates drives C, D, and E. Partitioning facilitates file management by allowing you to isolate the computer's operating system to drive C while storing applications and data files on separate drives D and E (also referred to as partitions).

password
A string of characters that the user must enter before the system allows access or system privileges.

PC Card
A credit card-sized peripheral interface standard for portable devices. Types of PC cards (also known as PCMCIA cards) currently offered by major vendors include fax/modems, LAN, storage cards, and wireless communications devices.

peripheral
Input or output device not under direct computer control. A printer is a peripheral device.

pixels
Picture elements. Tiny dots that make up a screen image.

port
Provides the means for an interface between the microprocessor and external devices. A cable connector is usually plugged into the port to attach the device to the computer.

processor
In a computer, a functional unit that interprets and executes instructions.

prompt
A special symbol indicating the beginning of an input line. Also a message that appears on the screen indicating that the user must take a certain action.

Q

QWERTY
The QWERTY keyboard, designed in the 1800s for mechanical typewriters, refers to the first six keys (QWERTY) on the top row of letters on the standard keyboard.

R

RAM
Random Access Memory. A storage device into which data is entered and from which data is retrieved in a nonsequential manner.

read
To extract data from a storage device such as a diskette.

ROM
Read-Only Memory. Memory in which stored data cannot be modified by the user except under special conditions.

reset
The process of returning a device to zero or to an initial or arbitrarily selected condition.

resolution
The degree of screen image clarity. Video display resolution is determined by the number of pixels on the screen. Resolution is usually specified in pixels by scan lines, for example, 1024x768. See pixels.

RS-232C
Standard interface for serial devices. This port is sometimes referred to as the serial port.

S

scanner
An optical device that reads printed material and converts it to a computer screen image.

serial interface
An interface that communicates information one bit at a time.

serial printer
A printer with a serial interface.

SIR
Serial Infrared, an infrared technology that sends data at 2.4 Mbit/second (2,400,000 bits per second).

SO-DIMM
Small Outline Dual-Inline Memory Module. A small circuit board that holds memory chips. A dual in-line memory module (DIMM) has a 64-bit path.

software

Programs that run on a computer such as operating systems, word processors, and spreadsheets.

SpeedStep technology

Intel SpeedStep technology provided with some Pentium III processors lets you customize high-performance computing on your tablet PC. When powered by a battery, the processor drops its computing speed to lower power consumption and conserve battery life.

S/PDIF

Sony and Philips Digital Interconnect Format. S/PDIF enables a computer system to produce digital audio output through the use of an optical output cable to an optical disk device.

Standby mode

A state of power management that puts the system to "sleep." Standby mode shuts down all devices in the system while retaining data and system status.

SVGA

Super Video Graphics Array. Graphics technology that supports up to 256 or more colors and a graphics resolution of 800 x 600 pixels.

SVGA+

Super Video Graphics Array Plus. Graphics technology that supports up to 262,144 colors and a graphics resolution of 1400 x 1050 pixels.

system board

The main printed circuit board inside the system unit into which other boards and major chip components, such as the system microprocessor, are connected.

s-video
Short for *super-video*, a technology for transmitting video signals over a cable by dividing the video information into two separate signals: one for color, and the other for brightness. When sent to a television, s-video produces sharper images and superior color definition.

T

TFT
Thin Film Transistor. A type of LCD color screen that supports up to 16.8-million colors.

U

USB
Universal Serial Bus. This external bus standard supports the connection of up to 127 peripheral devices, such as mice, modems, and keyboards. USB supports plug-and-play installation on some systems.

V

VGA
Video Graphics Array. Graphics technology that supports up to 256 colors and a graphics resolution of 640x480 pixels.

volatile memory
Storage media that loses its data when system power is turned off. Standard memory and memory that you add to the Versa LitePad tablet PC are volatile memory. See nonvolatile memory.

W

warm boot
Process of resetting the computer without turning off the power through keyboard input (pressing Ctrl, Alt, and Del keys simultaneously). The system returns to an initial or arbitrarily selected condition.

warm swap

Process of swapping devices in and out of a computer system without turning off the power. The system must be in a sleep state before removing or inserting a device.

waveform

A graphic representation of a sound wave as displayed on an oscilloscope, which converts sound waves into electronic signals.

write

To record or store information to a storage device.X

XGA

Extended Graphics Array. This high-resolution graphics standard supports 1024x768 pixels and 16 million simultaneous colors. XGA also supports non-interlaced monitors.

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Regulatory Statements

The following regulatory statements include the Federal Communications Commission (FCC) Radio Frequency Interference Statement, compliance statements for Canada , battery disposal and replacement information, and the Declaration of Conformity.

FCC Statement for United States Only

WARNING Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from the one to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Department of Communications Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations (pursuant to ICES-003 Issue 2, Revision 1).

Avis de conformité aux normes du ministere des communications du Canada

Cet equipment ne depasse pas les limites de Classe B d'émission de bruits radioelectriques pour les appareill numerique, lelles que prescribes per le Reglement sur le brouillage radioélectrique elebil por le minisieredes Communications du Canada.

Battery Replacement

A lithium battery maintains system configuration information. In the event that the battery fails to maintain system configuration information, NEC Solutions America recommends that you have the battery replaced. For battery replacement service, call your NEC Solutions America dealer or NEC Solutions America Support Services.

⚠ WARNING There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

⚠ AVERTISSEMENT Il y a danger d'explosion s'il y a replacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

Battery Disposal

The main battery is made of Lithium Ion (Li-Ion).

Do not place used batteries in your regular trash. The batteries must be collected, recycled, or disposed of in an environmentally approved manner.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the batteries.

LCD Panel Disposal

The LCD lamp in your computer's LCD panel contains mercury.

Do not place a used LCD panel in your regular trash. The panel must be collected, recycled, or disposed of in an environmentally approved manner.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the LCD panel.

Wireless Devices

To comply with FCC and Industry Canada RF Exposure requirements, NEC Solutions America recommends when using the NEC Versa LitePad tablet PC with the built-in wireless LAN module, you maintain a distance of least 1 inch (2.5 centimeters) between the antenna of this device and all persons.

NEC Solutions (America), Inc.

DECLARATION OF CONFORMITY

We, the Responsible Party

NEC Solutions (America), Inc.
10850 Gold Center Drive, Suite 200
Rancho Cordova, CA 95670
www.necsolutions-am.com/mobilesolutions

declare that the product

NEC Versa LitePad

is in conformity with part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.